

The Impacts of a "Free Movement of Goods" Directive

Pilot Study

Regulatory Impact Analysis of the Introduction of the Low Voltage Directive into Lithuanian Law

Contents

1.	Main findings.....	4
2.	Policy Recommendations.....	9
3.	Research method.....	14
4.	Economic Impact Analysis and Risk Assessment.....	21
5.	Legal Analysis	41
6.	Institutional Analysis	49
7.	Appendix: Impacts of analogous regulations in other countries	63
8.	Appendix: Methodological documents of the research.....	72
9.	Appendix: Useful Internet addresses on the Low Voltage Directive.....	80
10.	Appendix: Detailed statistical overview of the relevant Lithuanian industry and trade.....	81
11.	Acknowledgements.....	85

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Detailed Contents

1.	Main findings.....	4
1.1	The measure.....	4
1.2	The present volume of the activities under the impact.....	5
1.3	Compliance costs.....	5
1.4	Enforcement costs.....	6
1.5	Indirect economic impacts.....	7
1.6	Risks.....	8
1.7	Winners and losers.....	8
1.7.1	Winners.....	8
1.7.2	Losers.....	8
1.7.3	First loser - then winners.....	8
2.	Policy Recommendations.....	9
2.1	Transition Period.....	9
2.2	The system of relevant policy fields.....	9
2.3	Institution building.....	10
2.4	Support policies.....	11
2.4.1	Modifying and fine-tuning of existing support policies.....	11
2.4.2	Raising awareness.....	13
3.	Research method.....	14
3.1	Information sources and the error margin of the estimations.....	14
3.2	Conceptual framework.....	14
3.3	Doing it step by step.....	18
4.	Economic Impact Analysis and Risk Assessment.....	21
4.1	Impact superposition.....	21
4.2	Impact systematisation.....	21
4.2.1	Impact system by types of recipients.....	21
4.2.2	Impact system by immediacy.....	25
4.3	Compliance costs.....	26
4.3.1	The present situation of the Lithuanian electrotechnic industry.....	26
4.3.2	How Lithuanian electrotechnic industry complies.....	27
4.3.3	How importers of electrical equipment comply.....	30
4.4	Enforcement costs.....	31
4.5	Indirect economic impacts.....	32
4.5.1	:Statistical assessment of the present trade flows and prices.....	32
4.5.2	A conceptual model for estimating the impact on the import from CIS.....	34
4.5.3	Import from CIS.....	35
4.5.4	Import from the EU.....	36
4.5.5	Lithuanian production put on the Lithuanian market.....	37
4.5.6	Export to the EU.....	38
4.5.7	State revenues.....	39
4.6	Risks.....	39
5.	Legal Analysis.....	41
5.1	The re-arrangement of the Technical Barriers to Trade.....	41
5.2	LVD as a vertical EU Directive.....	43
5.3	The regulation to be introduced.....	43
5.4	Relationship between the new regulation and Lithuanian horizontal regulations.....	45
5.5	Lithuanian vertical regulations to be abolished due to transposition of LVD.....	46
5.6	Summary of Legal Analysis: the differences between transposed LVD and the present regulation.....	47
6.	Institutional Analysis.....	49
6.1	An overview of the institutionalisation of the defence against unsafe products.....	49
6.2	State Quality Inspectorate.....	49
6.2.1	Institutional arrangement.....	49
6.2.2	Resources.....	51
6.2.3	On the safety of non-food products, in particular of electrical equipment.....	51
6.2.4	Linkages.....	53
6.3	Lithuanian Custom's Department.....	54

6.4	National Accreditation Bureau.....	54
6.4.1	Institutional arrangement	54
6.4.2	Accreditation activities.....	56
6.4.3	International co-operation	56
6.4.4	EU-related development of the accreditation system.....	56
6.5	Lithuanian Standardization Board.....	57
6.5.1	Institutional arrangement	57
6.5.2	Activities in relation to LVD.....	58
6.6	Third Parties - Certification Houses.....	58
6.6.1	Ltd. "EGSC" Certification Centre of Electric Equipment.....	58
6.6.2	Certification Body of State Enterprise „Infostruktura”.....	60
6.6.3	Ltd. „Sertika” Certification Centre for Electric Equipment.....	61
7.	Appendix: Impacts of analogous regulations in other countries	63
7.1	Impact Assessment of a proposed General Product Safety Directive in the EU	63
7.2	The transposition of LVD into Hungarian law and its impacts.....	66
7.2.1	The regulation	66
7.2.2	Enforcing institutions.....	66
7.2.3	Impacts on companies.....	67
7.2.4	Impacts on consumers.....	68
7.3	The Electromagnetic Compatibility Directive in Hungary	69
7.3.1	The EMC Directive.....	69
7.3.2	Transposition and expected impacts	70
7.4	The EMC Directive in Great Britain.....	71
8.	Appendix: Methodological documents of the research.....	72
8.1	Data Gathering Tasks.....	72
8.1.1	Outline of the legal analysis.....	72
8.1.2	Outline of the institutional analysis.....	72
8.1.3	Outline of the economic analysis	73
8.2	Questionnaire to companies	74
8.2.1	Background of the survey	74
8.2.2	Questions related to electrical equipment generally.....	75
8.2.3	Safety and in-house activities.....	75
8.2.4	Safety and the linkages of the company.....	76
8.2.5	Costs associated with Conformity Assessment Procedures	76
8.2.6	Questions on the impacts of transposition of LVD	77
8.2.7	General questions on the company.....	77
8.3	Compilation of company sample	78
8.4	Classification of LVD-related company costs, benefits and activities.....	78
9.	Appendix: Useful Internet addresses on the Low Voltage Directive	80
10.	Appendix: Detailed statistical overview of the relevant Lithuanian industry and trade.....	81
11.	Acknowledgements.....	85

1. Main findings

1.1 The measure

The harmonisation of product standards, technical regulations and certification systems is one of the most important instruments of the creation of the Single European Market. Product standards, technical regulations and certification systems are essential to the function of modern economies. They can raise the unit cost of production, transportation and trade, and therefore they may inhibit international trade. To the extent that this occurs, standards, technical regulations and certification systems are considered technical barriers to trade.

The adoption of the Low Voltage Directive (LVD) is a measure of which the impact mechanism can be regarded as typical among New Approach Directives and the conclusions about its economic impact on Lithuania can be easily generalised to most of the EU directives ensuring free movement of goods. The Directive has not been chosen because its impact is particularly large, but rather in order to exemplify in the logic of a case study or of a pilot project the economic and administrative processes set forth by the adoption of such a measure.

LVD defines a certain transparent and widely accepted, harmonised structure for those technical regulations and enforcing institutions, which regulate the conformity assessment of low voltage electrical equipment in nation states. LVD is in force since more than two decades in the member countries of the EU. In Lithuania it is transposed as part of the adoption plan of the Acquis Communautaire. LVD's objective is to facilitate

- free movement of and
 - safety at use of
- electrical equipment between certain voltage limits.

The measure

- removes regulations providing for the obligatory certification of a wide scope of electrical equipment, including those for household use
- and introduces new conformity assessment procedures with revised safety requirements for electrical equipment in the scope of the regulation.

The main recipients of the impacts of the measure are

- companies manufacturing and importing electrical equipment
- public administration agencies responsible for enforcing market surveillance, with special respect to the State Quality Inspection and Customs Department
- third parties such as certification bodies, which are outside public administration but are designated to perform certain functions on behalf of the public administration
- and users: individual and corporate consumers of electrical equipment.

1.2 The present volume of the activities under the impact

The following statistical estimations are not exact, but they are sufficient to estimate the costs and gains. There were no better numbers available, because there is no registration of products by voltage classes.

- The number of Lithuanian manufacturing companies producing low voltage equipment is approximately 200, two-third of them are small companies. These companies are to be found in sectors 29 -33 by NACE code. They produce an approximate volume of low voltage equipment of 1,3 Billion Litas per year, one-third of which, a volume of approximately 400 Million Litas is sold on the local market.
- Two-third of the local production of low voltage equipment, approximately 900 Million Lt. is exported, in roughly equal proportions to the following destinations: (1) EU, (2) CIS and (3) other countries.
- Total import of low voltage equipment is approximately 2 Billion Litas, (2) half of which comes from the EU, (2) one-tenth coming from CIS and (3) the rest from other countries.

1.3 Compliance costs

Compliance costs are direct monetizable, immediate cost consequences of the impact recipients' complying with the measures. The quantities below are not forecasts, because care has been taken to filter out impacts of all other events. The costs are to be understood under the hypothesis that the measure will be introduced and nothing else changes. Compliance costs are expressed as annual costs, which however can be significantly reduced by increasing the fix one-time costs, i.e. investments into technology and product development, laboratory, know how and organisation to meet the challenges represented by the measures.

Activities generated or phased out for companies. Compliance costs attributable to LVD will arise due to (1) necessary product and technology upgrading (2) additional laboratory testing (3) and administrative activities. Old compliance costs will not be due anymore because (4) with the exception of a narrow range of sensitive products, certification will be voluntary.

Basis of calculation. The recipients of impacts (1) to (4) are different, overlapping sets of companies. Conformity assessment costs depend significantly on the number of types offered by the company and less significantly on the volumes offered. They are to be computed as recurrent costs, because of

- frequent introduction of new types or modification of old types
- the need of annual review of the manufacturing process. (Manufacturing process review can be done on a biannual basis, if the company has an ISO quality assurance system)

For a given company:

- Compliance costs are
- proportional to the obsolescence of existing products and technologies
- and inversely proportional to sales on EU markets.
- Unit compliance cost is inversely proportional to company size.

Table 1

Lithuanian manufacturing companies: compliance costs attributable to the measures

Basis: present production of low voltage equipment approximately 1,3 Billion Litas

Activity	Magnitude of annual compliance costs on the hypothesis that nothing else changes
LVD-related product and technology upgrading	Plus 10-15 Million Litas
LVD-related laboratory testing	Plus 2 -4 Million Litas
LVD-related administrative activities	Plus 2 -4 Million Litas
Abolishment of obligatory certification	Minus 1 Million Litas

As a direct consequence of the above activities in the whole electrical equipment manufacturing industry an additional 100 -150 jobs will be created, most of them in the testing and administrative domain. The ensuing personnel costs are included in the tables above.

For importer companies compliance costs will be only due to change of administrative activities.

Table 2

Importer companies: compliance costs attributable to the measures

Basis: present import of low voltage equipment approximately 2 Billion Lit

Activity	Magnitude of annual compliance costs on the hypothesis that nothing else changes
LVD-related administrative activities	Plus 1 - 2 Million Lit
Abolishment of obligatory certification	Minus 1 Million Lit

1.4 Enforcement costs

The overview of enforcement costs is as follows. It is to be noted that the revenues generated for these institutions indirectly by the measures are in a separate chapter.

Table 3

Government institutions and third parties: enforcement costs attributable to the measures

Activity, Institution	Magnitude of one-time investment needed, related to LVD
Additional resources for State Quality Inspectorate	0,1 Million Lt
Harmonised Standards translation and adoption by Lithuanian Standardisation Board	0,5 Million Lt.
Assessing conformity by Third Parties	2 Million Lt.

Government will have to finance

- the upgrading of public institutions such as Market Surveillance, with special respect to the co-operation between State Quality Inspectorate (or its successor organization), Customs Offices and Third Parties
- and the costly translation and adoption of still some 200 standards under LVD (200 under LVD are already translated).

In particular, the laboratory infrastructure available at government bodies or third parties has to be upgraded. It has to still to be decided, which of the necessary additional laboratory capacities will be subordinated to government bodies such as State Quality Inspectorate or to third parties. A viable system of co-financing of third parties by

- Government,
- companies submitting defect goods,
- and the third parties themselves

has to be worked out.

1.5 Indirect economic impacts

Indirect economic impacts are

- altered production and trade flows and
- altered prices
- and their consequences
- for the companies: profits (e.g. on sales of electrical equipment)
- for the State: taxes (e.g. on profits) and other revenues (e.g. standards bought by companies)

The reliability of indirect economic impact calculations is lower, than those of compliance and enforcement cost calculations. In order to estimate trade flows - in lack of exact data and good economic models - approximations and intuitive models are used. As it was the case with the costs, the quantities below are not forecasts, because care has been taken to filter out impacts of all other events. The gains and losses are to be understood under the hypothesis that the measure will be introduced and nothing else changes.

For trade flows the basis of estimation was as follows. In case of a specific trade relation (e.g. import from country A to Lithuania) the trade flow change which can be attributed to LVD is a balance of

- increase of sales of LVD-conform or LVD-upgradable products
- and decrease of sales of un-upgradable products.

all of these dependent on compliance costs.

Table 4
Indirect economic impacts attributable to the measures

Time dimension	Impact on ...	Estimated present volume of trade flow	Estimated annual impact on the hypothesis that nothing else changes
Shorter term	Locally produced and locally sold	400 Million Lt	Plus 10 - 20 Million Litas trade flow for competitive, minus 10 - 20 Million Litas for un-upgrade-able goods
Shorter term	Import from EU	1 Billion Lt.	Plus 10 -20 Million Litas trade flow
Shorter term	Import from CIS	200 Million Lt.	Minus 10 - 30 Million Litas trade flow
Shorter term	Import from other countries	800 Million Lt.	Plus 5 - 10 Million Litas trade flow
Longer term	Export to EU	300 Million Lt.	Plus 20 - 30 Million Litas trade flow
Longer term	Locally produced and locally sold		Plus 10 - 20 Million Litas for upgraded goods
Longer term	State revenues from taxes and from standards sold to companies		1 Million Litas

Price changes attributable to LVD of cheap low voltage electric equipment products in Lithuania are likely to grow by only a few percentage points if at all and only on shorter term.

1.6 Risks

Annually there are 1500 fires due to electric causes in Lithuania, one-tenth of which is due to the deficiency of electric products, to manufacturer's fault. In other words yearly 150 fires are caused by unsafe products. In Central and Eastern Europe the number of defect types is on the increase, but the number of types on the market is also increasing, mostly due to increased legal and illegal import activity.

As of now, there are three institutional lines of market defence against unsafe goods distributed by irresponsible companies. The three lines are: Customs, Certification Bodies and State Quality Inspectorate. The defence performed by Certification Bodies will certainly be weakened through the decrease of their power due to the abolishment of obligatory certification of household electric goods and computers. Irresponsible companies might take advantage of this development, as they did in other countries. The arising safety risks should be reduced

- by transferring the powers lost in certification bodies to the authorities of Market Surveillance
- by complementing the loss of powers of certification bodies by development of infrastructure and know how
- and by enhanced co-operation of the above mentioned three institutions

1.7 Winners and losers

1.7.1 Winners

On the Lithuanian market

- Lithuanian manufacturers already exporting to the EU
 - and importers of EU made low voltage electrical goods
- will enjoy the advantages of the compliance difficulties caused for their competitors (especially for CIS companies, for illegal and semi-legal importers) by the new measures and the results of the abolishment of obligatory certification.

Safer equipment is an advantage for

- individual consumers
- and corporate users

of low voltage equipment, on the condition that market surveillance enforces the removal of unsafe goods from the market properly.

1.7.2 Losers

The measure causes a decrease of market share for

- Lithuanian companies which are not able to finance or to perform the upgrading of their products and technologies, most of them smaller companies.

Increased transaction costs and product upgrading costs will cause difficulties for

- importers from CIS countries
- and to consumers of cheap electric products to whom these costs will be shifted.

1.7.3 First loser - then winners

The measures cause impacts with an U-shaped time pattern for the following recipients.

For their losses in the Lithuanian market later will be compensated by entry to EU markets

- Lithuanian manufacturers which are able to upgrade their products according to the safety requirements of LVD.

Abolishing obligatory certification causes losses to

- certification houses,

but the enhanced need for conformity assessment services will be an impetus for their development.

Investments into the development of (1) market surveillance, (2) standardisation and (3) conformity assessment (a) infrastructure and (b) organisation will need substantive resources of

- the State

but it will be later compensated for these in form of (1) a better industrial structure, (2) the fulfilment of its commitments to the EU, (3) foreign investment and (4) increased revenues.

2. Policy Recommendations

2.1 Transition Period

The Lithuanian market should be protected from those electrical equipment which are not conform with the safety requirements of the Low Voltage Directive. Therefore the abolishment of obligatory certification of household, computer, cash register and radio electrical equipment should be preceded by an intensive development of the Market Surveillance System.

Experience in European Union member countries shows that a two year transition period is necessary and sufficient for all parties to prepare for the new system of technical regulations. This period is also available, because the contractual obligations of Lithuania allow this preparation time.

There is a transition period to be installed during which

- institution building has to take place, in particular the resources, organisational arrangement and procedures of the Market Surveillance System should be developed
- and various support policies should be installed to help the preparation of the affected companies, in particular the awareness to Legal Approximation of the companies should be raised

The financial aspects of the institution building and of the support policies (among them the awareness raising activity) should be explicitly addressed.

2.2 The system of relevant policy fields

LVD-related institution building and support policies should be regarded as integral part of all activities facilitating Legal Approximation, in particular in relation to New Approach Directives. The adoption of these directives is at the crossroads of several policy fields. In Lithuania each of the policy fields listed below are institutionalised to different extents, some of them barely existing, others well developed. Due to the fact that each of the policy fields are the tasks of different public bodies, the main challenge is to harmonise their activities with each other in order to facilitate the process of transition and integration.

- *Integration Policy, Single Market.* The most significant project of the European integration so far is the creation of the Single Market. Legal Approximation is an integration instrument to fulfill the Single European Market. Legal Approximation is necessary because barriers to trade have arisen as a result of different legislation of nation states that was introduced to protect health, consumer interest and the environment. There are some 1600 directives to be checked, whether their provisions are already incorporated into Lithuanian law or adoption is necessary. A large group of directives ensure the free movement of goods. Among them the 20 "New Approach Directives" (Low Voltage Directive is one of them) represent a very modern approximation method in the area of technical safety of goods using the standards set by European standardisation bodies, based on European agreements on certification and accreditation.
- *Trade Policy.* LVD and the other New Approach Directives define a discipline adopting certain technical regulations, standards, procedures of conformity assessment, testing and certification in order to facilitate the free movement of goods between Lithuania and its main trade partner countries. By introducing the New Approach Directives Lithuania is also facilitating the adoption of measures agreed under the GATT.

- *Market Surveillance.* This policy area protects directly the consumers, human and animal health and the environment from products and services which do not satisfy certain conformity requirements. It is institutionalised by public institutions which have the task to enforce product safety laws and the adopted New Approach Directives.
- *SME Development Policy.* Small and Medium Size Enterprises are the most vulnerable recipients of the impacts of the New Approach Directives. Surveys within EU Member States have shown that (a) the bigger a company the more likely that the Single Market Project brings more opportunities than threats to the company, and (b) the smaller a company, the more it concentrates on local markets, and therefore the more likely the firm neutral towards the Single Market Project. However, smaller companies have more difficulties when coping with administrative burden. Therefore the SME development policy area should introduce support measures to help the adaptation of this size class of companies to the new requirements which have arisen from Legal Approximation.
- *Technology and Innovation Policy.* This policy area has the task to facilitate the modernisation of the economy by supporting the frameworks of applied research, development, transfer of technology and know-how, with special respect to the quality and safety of products and services. It should help the process whereby companies adapt to the new requirements arising from Legal Approximation. This policy field administers various support measures which should be modified according to these aims.

2.3 Institution building

Institution building in relation to the New Approach Directives is mainly the task of Government bodies responsible for

- Market Surveillance Policy
- and Trade Policy.

Market Surveillance is a function which is enforced in all countries by various Government agencies. In Lithuania it is a fact to be respected that that the functions of Quality Inspection, Customs, Standardisation and Accreditation as institutionalised now, belong to three different Ministries. This creates clearly the need and challenge of co-ordination: the overall policy field of Market Surveillance should be co-ordinated by one of the existing Ministries. An appropriate Ministry should be designated which should then be responsible for the development and co-ordination of the core activities of Market Surveillance, in particular for the functioning and for the ongoing transformation of the State Quality Inspectorate (or its successor organisation).

International experience shows that the Ministry of Economy is the institution which is best suited to assume these responsibilities. It is not possible and not practical to subordinate all Government institutions responsible for some aspects of markets surveillance to this Ministry. However, the Ministry of Economy should assume responsibilities to maintain the co-ordination between all Government agencies responsible for Market Surveillance.

A development of well regulated and financed co-operation between the State Quality Inspectorate and the certification bodies is necessary. In particular a viable regulation should be established which facilitates the usage and the development of the laboratory infrastructure. At present co-operation of these organisations is based partly on informal understanding. This regulation should include provisions on how product tests should be financed. Regarding the financial participation between

- State Quality Inspectorate
- certification bodies
- and the companies putting the product on the market

best practices of foreign countries should be followed

Also a well regulated and financed co-operation between State Quality Inspectorate and the Customs must be established. This co-operation should be based on timely exchange of information, on regular briefings on the most important issues of protecting the market from unsafe products.

The activities of the State Quality Inspectorate should be extended from the present consumer protection objective to monitor business to business activities as well.

Companies putting non-compliant products on the Lithuanian market should be fined to a greater extent than it is customary now. The fines which are thus accumulating should contribute

- to the continuous functioning
- and to the development of Market Surveillance.

Interest conflicts arising

- during the rule-making process
 - and during the enforcement of Free Movement of Goods Directives
- should have a suitable organisational framework to be dealt within. Non-governmental fora have to be developed to facilitate interest reconciliation
- between various interest groups of the companies and consumers
 - between rule makers and the regulated companies.

For these purposes a co-operation framework and regular consultation occasions, events should be developed.

2.4 Support policies

2.4.1 Modifying and fine-tuning of existing support policies

In order to enhance the production and export activity of Lithuanian equipment manufacturing firms, various incentives and support measures:

- direct and indirect
- existing and still planned

should be co-ordinated by taking into consideration the changing regulatory environment.

For this purposes various partial policy fields such as

- SME development policy, and
- Technology (quality and innovation) policy

should be orchestrated in a way which is described below.

Target group, eligibility. In order to counterbalance the negative side effects of the introduction of LVD into Lithuanian law, support should be directed in particular to the following firm types:

(1) To those firms which are small and manufacture many types. The rationale to do so is evident, because

- additional administrative activities and compliance costs due to LVD are proportional to the number of types produced in a particular company, and
- in case of small firms the unit compliance costs are higher due to lack of economies of scale.

(2) Special attention has to be paid to those firms, which were not obliged to certify their products up to now, but will have to do so after the introduction of the measures. Such firms are typically producing equipment for industrial use and have not developed administrative structures and company culture for conformity assessment up to now.

Aims to be supported.

(1) In case of Lithuanian companies which are under the negative impact of the introduction of LVD, support policies should be devised. Within the framework of this support system

- the adaptation of technologies and products to meet LVD requirements
- company managed innovation and development activities which have results compatible with the safety requirements of LVD
- the development of company administrative structures to perform LVD-related compliance assessment procedures
- and the introduction of ISO quality assurance systems

should be supported.

(2) Not only individual firms deserve support, but the co-operation of firms leading to the spreading of innovation should be also regarded as an aim which has to be supported. Such co-operation can take the form of

- *subcontracting*: whereby a bigger buyer firm offers its know-how to a smaller firm on how to comply with LVD
- *clustering and strategic partnerships*: whereby smaller companies team with each other, cooperate with each other for a joint purpose such as exporting to the same market, share LVD-related know-how in an organised manner, own and use the same measurement devices jointly.

It is to be taken into consideration that if support resources are scarce, it is better to support

- the spreading of information, know-how,
- innovation activities
- the co-operation between firms
- organisational developments within firms which change company behavior (e.g. ISO, or a the hiring of a compliance assessment specialist)

then to support company investment.

Financing of the support measures. As of the financial form of the above support measures, this support can take the form of

- partial (typically: 50%) reimbursement of consultancy costs
- or the form of interest rate subsidy.

Existing Lithuanian Government and EU funds for

- economic development
 - or for SME (Small and Medium Size Enterprise) development
- should earmark subsidies for the above mentioned purposes.

Soft loans and subsidies. Existing Government, EU or other party supported soft loans and subsidies should be tailored to the needs of the adaptation to the requirements of the Free Movement of Goods directives. This means that

- target groups and eligibilities
- and aims ,

chapters of existing loan and subsidy structures should take into consideration the above mentioned target groups and eligibilities aims related to LVD.

2.4.2 Raising awareness

Awareness raising in relation to New Approach Directives is a special kind of support policy which concentrates on information provision to the recipients of the impacts.

For the whole equipment manufacturing sector it would be very beneficial if information on standards, technical regulations and EU type conformity assessment procedures was disseminated among the companies. Following the examples of EU member states an information campaign should be organised in order to inform the companies on their new rights and duties regarding conformity assessment. Organisations outside the public administration which assume some responsibilities of the organisation of markets could play a vital role in this, such as

- certification bodies
- chambers of commerce
- and industrial associations

Initiator, host and executives of the information campaign. The information campaign should be organised by a Project Organisation. The scope of the activities of this Project Organisation should be limited, optimally to the Free Movement of Goods Directives. The initiation of such a Project Organisation should be the task of the of the Ministry of Economy, but the tasks should be outsourced to consultancies, certification bodies, administrative bodies, media companies, chambers of commerce, trade associations, universities and other organisations. Optimally the Project Organisation should exist only for a limited time, e. g. for 2 years.

Consultancies. Most of the work to be done within the Information Campaign should be contracted out to technical, legal and marketing consultancies which can facilitate the preparation of the companies for the requirements of the Free Movement of Goods Directives.

Financing. The information campaign should be co-financed by the Lithuanian Government and by aid programs of the EU. Some of the information could be sold in a market-conform way to the companies. The campaign should be organised in way that it should be self-financing and ready to privatisation after 2 to 4 years.

Content. The content of the information campaign should be demand-oriented. As a first choice, it should concentrate on popularising

- regulations, compliance assessment procedures and regulating institutions
- certification procedures and bodies
- standards and frequently asked technical questions
- training materials and training courses
- support measures and support institutions
- procedures and best practices relating to the questions of
 - exporting to the EU
 - complying with Free Movement of Goods regulations
- non-governmental organisations, associations and/or interest representation fora for the recipients of the impacts of the regulation.

Publication. In particular, a Small Business Guide for Exporting should be compiled, with special respect to those

- administrative and safety requirements
- and institutional and other resources

which are consequences of the Free Movement of Goods directives. There are many examples of such booklets from other countries which should be adapted to the Lithuanian situation.

Media. For information dissemination

- traditional media such as professional newspapers
- meetings
- and the Internet

should be extensively used.

3. Research method

3.1 Information sources and the error margin of the estimations

Impact analysis was based on the following information sources and hypotheses.

- Consultations to determine compliance costs were conducted with 15 Lithuanian manufacturing companies, 2 importing companies.
- Consultations to determine enforcement costs were conducted in all relevant government bodies and in 3 "third parties", i.e. certification bodies.
- Industrial and foreign trade statistics was used.
- Calculation of compliance costs was based on present activities of recipients as derived from the interviews.
- Calculation of trade flow and trade flow-dependent profits and taxes were based on present trade flows and on intuitive macroeconomic models.
- Impacts of analogous measures in foreign countries were studied.

Level of exactness:

- *Qualitatively* the full overview of impacts was possible.
- *Quantitatively*. However, quantitative statements have a certain error margin. The impacts which are attributable to LVD and only to LVD are small if compared with the variations of the manufacturing costs and trade flows concerned, they are subjected to bias. The sample size of the interviewed companies was satisfactory, but quite a few of the companies were unable to assess the gains and losses under the hypothesis of LVD being enforced. This method allowed us to make cautious conclusions. Therefore the level of exactness is as follows:
 - aggregated direct costs are heavily rounded and are accompanied by an error margin of 30%.
 - aggregated indirect economic impacts are accompanied by an error margin of 50%.

3.2 Conceptual framework

The hypothesis of "other things being equal". Individual regulations usually have a small impact as compared with the impacts of major, mostly unpredictable political and economical changes. For example the impact of regulations removing barriers of trade interact with consumer protection regulations and with the impacts of changing customs tariffs.

Impact assessment is not identical to forecasting the course of events. It is useful if authors of RIA enter into such analyses, but it should be clearly separated from their formulation of the net impacts. However, Regulatory Impact Assessments are supposed to make valid, if possible quantitative statements on economic impacts and risks, but focus the analysis only to those, which can be attributed to the regulation - and if possible: only to the regulation - on the assumption that nothing else but the regulation changes, i.e. using the assumption of "*other things being equal*". However, it helps decision-makers if the context, the broad picture is also given. If the impact of other regulations and policies is inseparable from the impact of the measure under investigation, this fact should be clearly mentioned.

Comparison of scenarios. is an important concept in RIA. When measuring the impacts, one compares usually various measures, which are called *scenarios*. Comparison is usually made between the scenario of not introducing the regulation, and between various way of introducing the regulation.

- The basic scenario (also called Baseline Scenario, or Scenario Null) is identical with the case that the regulation will not be introduced, i.e. "nothing is done".
- Scenario One is usually the introduction of the regulation in its pure form.
- Scenario Two is usually the introduction of the regulation, with some additional measures to prevent or to remedy the negative impacts under Scenario One.

In case of the Low Voltage Directive the following scenarios are reasonable

- Scenario Null: the regulation is not introduced, i.e. LVD is not getting transposed into Lithuanian law, and the obligatory certification system for household products remains.
- Scenario One: LVD will be introduced and enters into force on 1. Jan. 2001.
- Scenario Two: LVD will be introduced and enters into force on 1. Jan. 2003. and during this transitional period the institutional development of Market Surveillance takes place.

What would happen if not? This question clearly introduces the time dimension into the analysis. This asks for a comparison which is

- not a comparison between scenarios
- but between the present situation and a situation somewhat later, under the hypothesis of non-action.

This comparison is expressed by the question "What would happen if the measure would not be taken?" In case of the Low Voltage Directive the answer here is simple, because LVD belongs to that part of the *Acquis Communautaire*, which has to be transposed, because Lithuania has contractually committed himself to it.

Impacts can be grouped by the following *aspects*

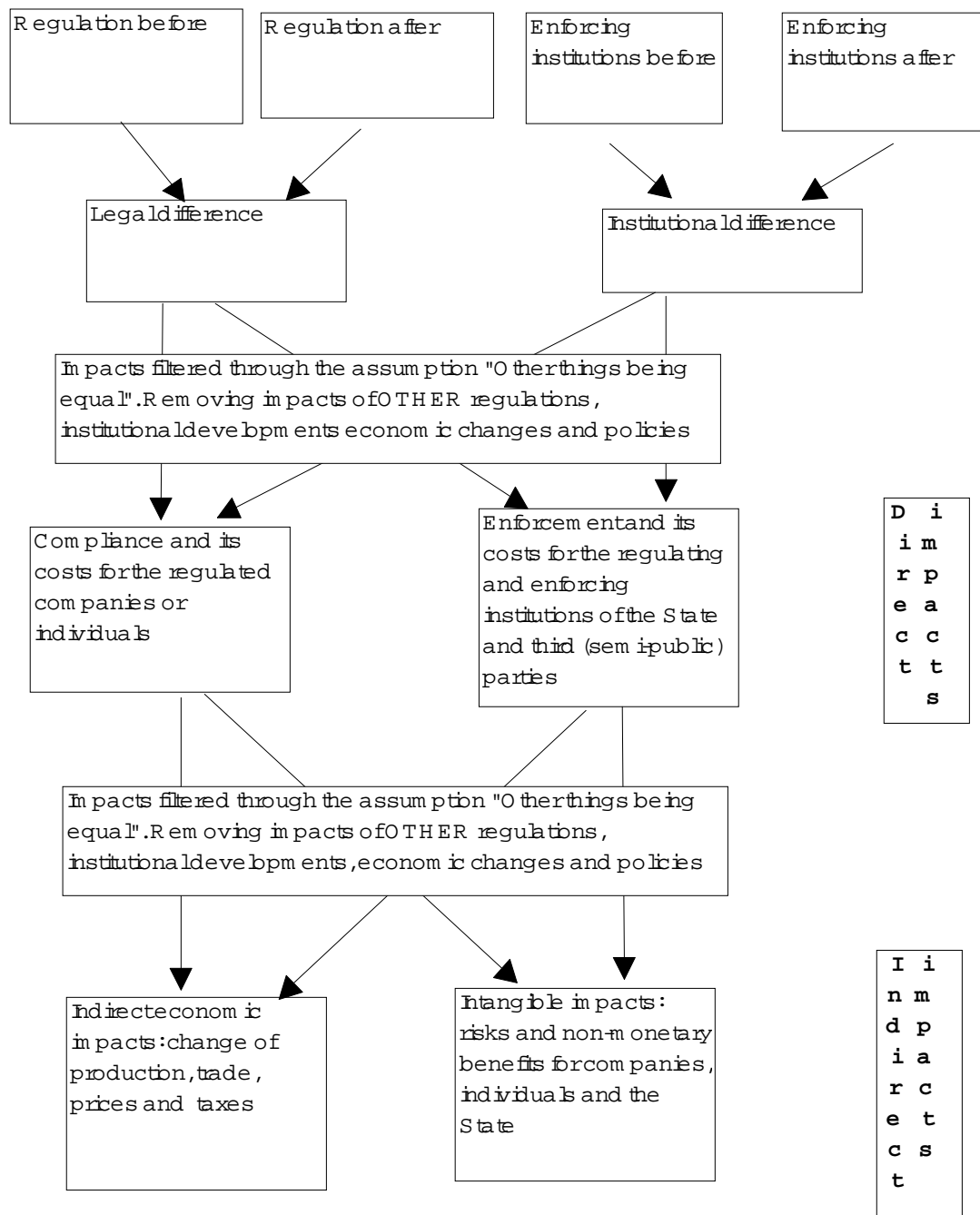
(1) By *recipients*. Recipients of impact or also called agents can be various

- institutions of the state or of local administrations (e.g. Market Surveillance or Customs Offices)
- types of companies, (e.g. size classes of companies, various sectors of industry, or exporting companies)
- types of households (e.g. low income households)
- types of regions (e.g. regions near the border)

(2) By *immediacy*:

- *Direct impacts* will be generated by additional (or abolished) activities of the recipients which are attributable to the legal changes.
- *Compliance activities* (e.g. companies checking new safety requirements and following new administrative procedures) generate compliance costs.
- *Enforcement activities* of the government and semi-public bodies policing the above activities generate enforcement costs.
- *Indirect impacts*:
- *Indirect economic impacts* of altered economic behavior of the recipients which are aimed at minimising compliance costs. (E.g. companies raising prices, or putting less products on the market, and government receiving the tax consequences thereof.)
- *Intangible impacts* that cannot be expressed in monetary terms, such as
- risks
- or their opposite: enhanced security, quality of life, moral or political gains.

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Error margin. Impact analysis can be made by several levels of exactness

- *Qualitative* analysis has the task of producing a logical system of impacts. This is always feasible.
- *Quantitative* analysis has the task of estimating the extent of the impacts. This is not always feasible with the necessary exactness. Here the error margins depend
 - on the sample size
 - on the capability of the respondents to quantify micro-level compliance costs and changes of economic behavior (e.g. trade flows) under the scenario of the measure being introduced.
 - on the appropriateness of models which are used to estimate the change in economic behavior of the recipients of impacts
 - and on the applicability of the numbers given in official statistics for the given problem.

In case of LVD the quantitative analysis was possible to the following extent:

- sample size was satisfactory (5% of companies concerned)
- but for many interviewed persons the scenario was too complex to attach reliable enough costs to it
- compliance cost models were more reliable than intuitive macroeconomic models used for estimating trade flow changes
- and in lack of good statistics the quantity of products operated with low voltage had to be estimated.

All this allowed only a limited level of exactness as expressed in magnitudes.

3.3 Doing it step by step

RIA has to be performed by doing the following steps.

(1) Legal Analysis.

- First the measure to be introduced must be studied.
- Other related regulations have to be highlighted and it has to be decided, to what extent it is possible to separate the impact of the regulation under investigation from the impacts of the related regulations.
- Previous regulation has to be compared with the new one. The difference between the two has to be highlighted. It is the difference, which makes the impact.

(2) Institutional Analysis. Parallel with legal analysis all

- governmental institutions, authorities, inspectorates
- and third parties (e.g. certification bodies)

have to be studied which have any part in the enforcement of the old and of the new measures. This can be done by desk research and by interviews.

(3) Economic Analysis and Risk Assessment.

What types of and how many recipients are under the impact? What economic activities are affected and what is their present extent? First a system of recipients and of their activities has to be created, and later a statistical overview has to be created by desk research (a) on all the recipients of the impact (e.g. companies), and (b) on the extent of the present activities which will be changed by the impacts (e.g. certifications, sales).

A survey, however limited has to be conducted. Beforehand, it has to be decided:

- *How to reach the recipients.* A decision has to be made, whether questioning the recipients on the impact will occur by interviews, questionnaires, telephone, email, on meetings, or using all of these methods.
- *Whom to reach.* A sampling plan has to be created in order to determine the recipients which have to be asked on the impacts. Consulting with representatives of groups of recipients (such as business associations) can reduce the necessary sample size.
- *What to ask.* A questionnaire or an interview outline has to be developed.

Compliance and enforcement costs are direct monetizable impacts which are taken into consideration by assessing (a) new compliance (and enforcement) costs and (b) previous costs which are not due any more. Model:

- unit costs (e.g. costs of upgrading a product) and patterns of economic behavior (e.g. what size classes of companies would develop own laboratory) are taken from the survey,
- these unit costs are multiplied by weights (or occurrences or incidences) which were taken from official statistics (e.g. present number of companies or present volume of production) or expert estimated (e.g. share of upgradable products)

Indirect economic impacts are taken into consideration by assessing the ensuing economic behavior of recipients (e.g. change of production and sales volumes). Here various intuitive or scientifically based models can be used. For example the impact of raising the tax or customs rate can be estimated by

- econometric or other models such as supply and demand elasticity considerations (see Chart "Toaster Market"), input-output analysis, Laffer curve
- or by simply relying on previous analogous cases and / or on foreign countries' experience.

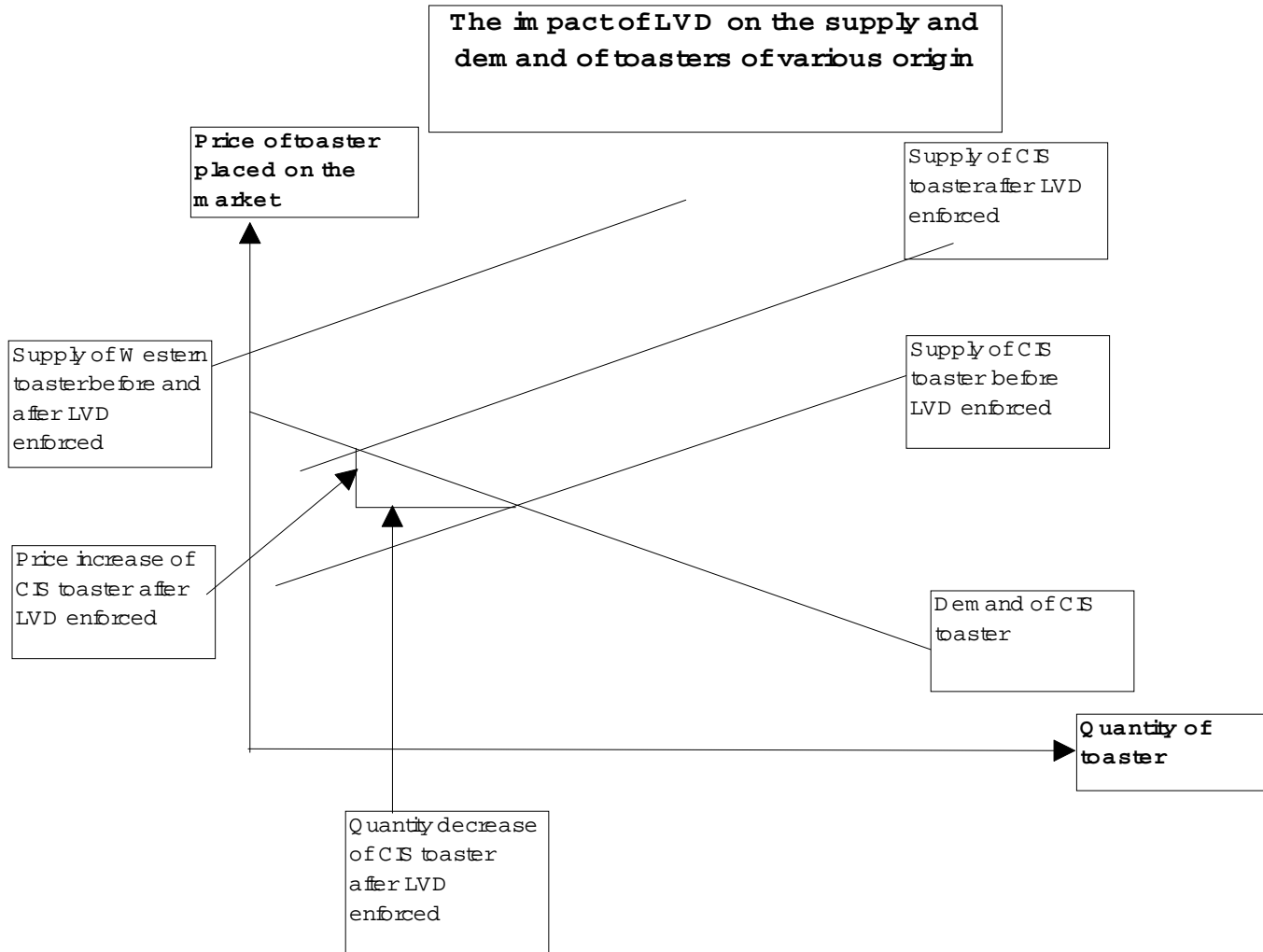
Intangibles: risks and non-monetizable benefits have to be taken into consideration by using sound judgement.

Winner-loser analysis. Based on the results of the above findings, for each group of a balance of costs and benefits should be made. The results should be expressed in a qualitative manner, i.e. winners and losers should be named but it is not necessary to compute, by how much the winners win.

(4) *Recommendations* for decision makers should be formulated to maximise gains and minimise costs and risks.

Chart "Toaster Market"

A conceptual model of supply and demand for estimating the indirect economic impacts



4. Economic Impact Analysis and Risk Assessment

4.1 Impact superposition

The impact of the transposition of LVD is difficult to separate from other regulations and policies:

- from the impact of other vertical regulations such as the transposed EMC Directive and the Machinery Directive
- also it interacts with the impacts of various horizontal laws, in particular with that of Law on Product Safety,
- and the impact is also dependent on economic policies in particular on trade policies (e.g. on customs rates) and institution development.

However, care has been taken to take account

- only of those recipients which receive the impacts of LVD
- and only for those impacts which are attributable to LVD.

For the above reasons the

- estimated compliance costs are substantially smaller than e.g. the costs of economic transformation of the companies or government institutions
- and an analogous statement holds for the indirect economic impacts as well.

4.2 Impact systematisation

4.2.1 Impact system by types of recipients

Impact is to be expected for the following institutions of the public administration and economic agents.

- Business entities:
 - Producers
 - Importers
- Government - Public Administration:
 - Market surveillance authorities
 - Standards Board
 - Tax incomes will change
- Third Parties: Certification Houses
- Users of electrical equipment: individual and corporate consumers.

The tables below contain a system of the impacts. The impacts are not quantified, but care has been taken to name all important impacts and their recipients. The grouping of the impacts is done by recipients.

Table 5
MANUFACTURERS IN LITHUANIA as recipients of impacts

Recipient, Type and Number of Impact	Name of Impact	Delimitation of Recipient and Delimitation of Impact	Proportionality of Impact
Manu- facturer Benefit 1	Export turnover is likely to increase due to more free access to the Single Market.	Only in companies with types under LVD. Only if LVD-related Adjustment was successful.	In proportion to number and turnover of types under LVD. In proportion to success of LVD-related Adjustment process.
Manu- facturer Benefit 2	Abolishment of obligatory certification, in particular abolishment of double certification.	Only in case of equipment under LVD both exported to the EU and sold in Lithuania as well.	Proportional to costs of abolished certifications.
Manu- facturer Benefit 3	Competitors with low quality, low safety, badly documented cheap products crowded out from the market	A benefit only for well LVD-prepared and well LVD-adjusting manufacturers.	Benefit proportional to additional turnover attributable to LVD-induced phasing out of competitors.
Manu- facturer Benefit 4	Involvement of EU-based investors becomes easier. Investors are more likely to invest in companies with EU-wide established procedures.	A benefit only for manufacturers with successful LVD-related Adjustment.	Benefit proportional to additional capital invested due to successful LVD-related Adjustment.
Manu- facturer Cost 1	Tests, measurements done by others. Contracting out the necessary testing activity in order to assess conformity.	Only in case of companies where economies of scale do not justify doing the tests on their own. Mostly small companies.	Proportional to cost of additional test requirements generated by LVD. Test costs proportional to number of types and turnover.
Manu- facturer Cost 2	Tests, measurements done by the company itself. Investing into new controlling and testing equipment, personnel, organisation.	Only in case of bigger manufacturers with complex types and complex production process necessitating continuous testing. Only if investment into in-house testing infrastructure pays off.	Proportional to cost of additional test requirements generated by LVD. Investment into in-house laboratory decreases unit costs of testing. Test costs proportional to number of types and turnover.
Manu- facturer Cost 3	(1) Technology upgrading not including laboratory testing. (2) Product upgrading: better materials and components.	Only in case of companies with obsolete technology and product	Product adjustment: dependent on costs of materials and purchased components, thus proportional on turnover.
Manu- facturer Cost 4	Administrative developments. Company measures to prepare (1) Conformity Assessment Declaration and (2) Technical Documentation files. To store and to provide them for authorities.	Effort additional only in case of companies which have not been exporting their types to the EU up to now.	Proportional to the number of types under LVD which have not been exported before to the EU up to now.
Manu- facturer Cost 5	Marketing type costs related to measures (1) to counter import competition (2) to penetrate EU markets.	Only to take into account to the extent of LVD-generated trade flows.	Proportional to sales on the respective markets.
Manu- facturer Risk 1	Decrease of production of goods prohibited under LVD to the extent that some companies may go bankrupt.	Only in case of companies unable to perform LVD-related Adjustment.	Inversely proportional to size of company.

Table 6
IMPORTERS IN LITHUANIA as recipients of impacts

Recipient, Type and Number of Impact	Name of Impact	Delimitation of recipient and delimitation of Impact	Proportionality of Impact
Importer Benefit 1	Abolishment of obligatory certification, in particular abolishment of double certification in case of equipment sold both in the EU and in Lithuania as well.	In case of any country of origin. Only in case of equipment designed for household use.	In proportion to number of imported types under LVD.
Importer Benefit 2	For all imported electric goods safety will be increased and safety documentation will be made according to the criteria of the EU.	In case of any country of origin. Only in case of products where safety requirements were previously not completely fulfilled.	In proportion to increase of safety requirements.
Importer Cost 1	Administrative developments. Company measures to prepare (1) Conformity Assessment Declaration and (2) Technical Documentation files. To store these documents and to provide them for authorities.	Significant cost only for importers of products from non-EU countries, which have not signed Mutual Conformity Recognition Agreements with the EU. (Have signed: USA, Canada, Australia, New Zealand, Japan, China, Switzerland, Hong Kong)	In proportion to number of imported types under LVD.
Importer Cost 1	Prices of goods imported from Eastern Europe will be higher due to (1) new administrative procedures and (2) enhanced safety requirements. Therefore demand and profits may decrease.	Mostly in case of Eastern European country of origin.	In proportion to number of types imported and to (1) increase of administrative costs + (2) cost effect of increased safety requirements = cost of LVD-related Adjustment = (1) + (2).

Table 7
The STATE as recipient of impacts

Recipient, Type, and number of Impact	Name of Impact	Recipient delimitation and impact delimitation	Proportionality of Impact
State Benefit 1	The adoption of the Directive facilitates the EU Integration of Lithuania. In particular additional trade flow to and from the EU expected.	Foreign policy, trade policy. Only to the extent of the additionally generated supply and demand of electric products under LVD.	The more consequently this barrier to trade removed, the bigger the benefit.
State Benefit 2	EU-based investors prefer harmonised regulation. Enhanced foreign investment improves capitalisation of Lithuanian industry and the balance of payment of the country.	Industrial policy, financial policy. Only in case of companies where products under LVD constitute a substantial part of outputs or inputs.	Proportional to the number of companies where products under LVD constitute a substantial part of outputs or inputs.
State Benefit 3	Improving the structure of electrotechnic equipment industry	Industrial policy. Only to the extent of successful LVD-related Adjustment of companies.	Proportional to additional competitiveness and profits of this sector.
State Benefit 4	Enhanced import of electric equipment from the EU generates additional tax income.	Fiscal policy. Only in case of companies importing from the EU products under LVD	Proportional to profit tax
State Benefit 5	Enhanced export of electric equipment to the EU generates additional tax income.	Fiscal policy. Only in case of companies capable of adjusting themselves to new regulation and thus generating additional export of products under LVD to the EU	Proportional to profit tax
State Cost 1	Developing the market surveillance system for the Republic of Lithuania.	Public Administration development policy. Special attention to the State Quality Inspectorate.	Resources proportional to extent of organizational development. Infrastructure, manpower, training of market surveillance system officials, inspectors. Development of linkages with other institutions, e.g. Customs.
State Cost 2	Development of standardisation	Public Administration development policy. Special attention to the Lithuanian Standardisation Board.	Adoption and translation of EU harmonized standards
State Risk 1	Enhanced illegal trading activity to avoid formalities.	Fiscal policy.	Proportional to tax losses. Inversely proportional to development of Customs.

Table 8
THIRD PARTIES, i.e. Certification Bodies as recipients of impacts

Recipient, Type and Number of Impact	Name of Impact	Delimitation of Impact	Proportionality of Impact
Third Party Cost 1	Decrease of income due to abolishment of obligatory certification of household electric goods.	SMEs will continue to buy services of third parties. Certification of industrial electrical equipment was not obligatory anyway.	Number of types of household electrical equipment put on the Lithuanian market.
Third Party Cost 2	Investments in order to improve laboratory infrastructure to assess fulfilment of LVD's safety requirements.	Lithuanian state investment reasonable to expect in proportion to Market Surveillance's planned co-operation with Third Party	In proportion to missing infrastructure.

Table 9
USERS OF PRODUCTS UNDER LVD as recipients of impacts

Type and Number of Impact	Name of Impact	Delimitation of Recipients, delimitation of Impact	Proportionality of Impact
User Benefit 1	Safer household equipment	Individual consumers	Proportional to number of households buying products under LVD
User Benefit 2	Safer capital goods. Inputs to the production process or service (such as purchased equipment and components) will be safer and better documented	Companies and institutional users buying inputs in form of products under LVD. The range of such companies and institutions is much wider than the electrotechnic industry.	Proportional to number of company and institutional users and to the value of their inputs under LVD.
User Cost 1	Price increase of certain categories of goods	In case of goods (1) where LVD-related upgrading is costly and (2) which are LVD-conform substitutes of un-upgradable goods	In proportion to difficulties of upgrading for manufacturers in Lithuania and CIS.
User Risk 1	Unsafe products reaching the individual consumer because of removal of obligatory certification.	Delimited by efforts of Customs and Market Surveillance. A risk households.	Proportional to turnover of types which are put on the market by irresponsible producers and importers
User Risk 2	Unsafe products reaching corporate users of electric equipment because of removal of obligatory certification.	Delimited by efforts of Customs and Market Surveillance. A risk for companies and institutions which use electric equipment (as final products or components) as their inputs	Proportional to turnover of types which are put on the market by irresponsible producers and importers

4.2.2 Impact system by immediacy

The following actual impact assessment of the introduction of LVD is done by the order of immediacy.

- Compliance costs: new ones and old ones which will not be due any more.
- Indirect economic impacts: changes in production and trade flows and prices as consequences of LVD
- Risks and not monetizable benefits.

In this system a type of recipient (such as the Government) can be found in all the three impact groups.

4.3 Compliance costs

The extent of direct monetizable impacts in form of compliance costs are shown in the Summary. The structure of this chapter is as follows.

- First an overview on the recipients of the impact is given.
- Then selected findings of the survey are shown which can be used as arguments to support the results presented in the Summary.

4.3.1 The present situation of the Lithuanian electrotechnic industry

Since the main recipient of the impact is the industry manufacturing electrical equipment, an overview of the relevant sectors is necessary. The statistical system does not allow to grasp exact data on the aggregate of such companies, and no statistics exists on the amount produced or turnover or number of types operating under low voltage. An approximate estimation of the companies and turnover involved is however possible.

The manufacturing of electrotechnic equipment and components is spread over a wide range of sectors. These sectors play a moderate role in the industrial structure of the country.

Table 10
Contribution to Lithuania's industrial output, 1999

Manufacture of machinery and equipment	2,6 %
Manufacture of power devices and electric equipment	3,2 %
Manufacture of radio, television, communication equipment	2,6 %

Further sectors in which electrotechnic equipment is manufactured:

Manufacture of office machinery and computers
Manufacture of medical, precision and optical instruments

Electrotechnic equipment is manufactured in approximately 200 companies, with a total employment of approximately 40.000. Of the companies approximately

- two-third are small companies in the sense of employing less than 50 people
- and one tenth are big companies in the sense of employing more than 250 people.

Table 11
An overview of the production and export of some sectors of the Lithuanian industry, 1998

	Industrial sectors	Number of enterprises including sole proprietors	Sales of industrial production Billion Lt	Of the total production, sales in Lithuania Billion Lt	Of the total production, exported Billion Lt
1	Manufacture of machinery and equipment	135	0,48	0,21	0,27
2	Manufacture of office machinery and computers	11	0,02	0,01	0,01
3	Manufacture of electrical machinery and apparatus	60	0,34	0,05	0,29
4	Manufacture of radio, television and communication equipment and apparatus	31	0,48	0,09	0,39
	Total	237	1,31	0,37	0,94

Source: Lithuanian Department of Statistics.

As compared with other sectors, electrotechnic industry has suffered the most due to the collapse of the Soviet markets and the system. The industry undergoes a painful reorganisation process. On the local market price competition is driven by CIS companies, quality competition is driven by companies of developed countries. On the markets of the CIS political and economic crises have decreased the demand on the products of traditional Lithuanian suppliers. A number of big companies which have earlier supplied the whole Soviet Union with their products, have shrunk to a fraction of their former size in terms of output, personnel and premises, transformed from large to a medium size enterprise, and have adopted a survival-oriented strategy (E.g. Fasa).

However, a number of companies are in the process of being recovered from the series of shocks caused by the abrupt loss of markets, changes of legal form, change of owners and business partners. (E.g. Lietkabelis) Reorganisation often involves changing the production profile, producing components instead of finished products, and becoming a subcontractor or performing repair service. Technology of major production lines represents in most of the companies the modernisation level of the 70s and of 80s. (E.g. Vilniaus Vingis) The involvement of foreign capital and subsequent upgrading of technology and know-how was performed successfully only in case of a minority of companies. Some of these companies have introduced technologies, procedures and products of international competitiveness and reached world markets. (E.g. Snaige) A limited number of successful middle sized companies manufacture high technology products, in typical cases performing assembly work (E.g. Eksma).

4.3.2 How Lithuanian electrotechnic industry complies

The assessed costs are as follows.

Table 12
Manufacturing companies: compliance costs attributable to the measures

Activity	Magnitude of annual compliance costs on the condition that nothing else changes
LVD-related product and technology upgrading	Plus 10-15 Million Lit
LVD-related laboratory testing	Plus 2 -4 Million Lit
LVD-related administrative activities	Plus 2 -4 Million Lit
Abolishment of obligatory certification	Minus 1 Million Lit

As a direct consequence of the above activities in the whole electrical equipment manufacturing industry an additional 100 -150 jobs will be created, most of them in the testing and administrative domain. The ensuing personnel costs are included in the tables above.

The above costs were determined by the following reasoning.

(1) Costs due to product and technology changes, not including laboratory testing.

Quantities. The recipients of this impact are companies, which have products and technologies to be upgraded due to unsatisfactory fulfilment of safety requirements of LVD. It is impossible to estimate exactly the proportion of such companies and such goods. However, regarding the composition of electrical produced in Lithuania by the level of obsolescence, the following statements hold.

The proportion of obsolete electrical products which are not satisfying all safety requirements

- is higher than among products imported from the EU
- but lower than in products imported from the CIS.

Therefore, by extending the hypothesis from the products to the companies, it is reasonable to assume that the proportion of Lithuanian companies which will have to undergo an adjustment process due to the new regulation will be lower than in case of CIS companies exporting to Lithuania.

Unit costs. One has to estimate the costs of such an upgrading. The interviews conducted among Lithuanian manufacturing companies have given many illuminating examples for this. Product and technology upgrading costs 1 to 5 per cent of the total manufacturing cost of the products. Typical examples:

- A Lithuanian producer of cables exports cables to France in the value of approximately 800.000 Litas per year. This was the first load in the history of this factory with CE mark. The production line which is suitable for manufacturing this type of cable, had to be upgraded for the one-time cost of 10.000 Litas in order to satisfy the additional requirements.
- Experts of TV set manufacturing have agreed on that the safety of TV sets depends to a great extent on the plastic materials used for the box and for the shield. Upgrading old type television sets to satisfy safety requirements means an additional 3-4% cost for the product.

From the above hypotheses and findings the following conclusions can be made.

Compliance costs for Lithuanian manufacturing companies due to product and technology changes, not including laboratory testing:

- Product and technology upgrading is not feasible in case only of a limited number of types and companies, and the total turnover of such companies is not significant.
- On the other hand there is a wide range of companies where upgrading is feasible and upgrading cost is between 1 to 3 % of production cost.
- Aggregated additional cost for company-paid upgrading of product and technology attributable to LVD is estimated to be approximately 1 per cent of total manufacturing cost of the sector.

(2) Compliance costs due to enhanced laboratory testing.

LVD and in particular the standards under LVD are very demanding on testing and measuring the safety-related features of electrical products. Therefore the recipients of this impact are

- not only companies with goods or technologies to be upgraded,
- but all companies manufacturing electrical goods within the scope of LVD.

Laboratory services - as all other services - can be (a) done by the company itself or (b) contracted out to professional, specialised laboratories. Demand on laboratory work will be especially high in case of companies which decide to do conformity assessment completely by themselves, which will be possible under the conformity assessment procedures introduced by LVD. However, the company costs of establishing a laboratory of full self-assessment capability *cannot be regarded as an extra compliance cost*, because is not obligatory to do all tests in-house. Rather, in-house laboratory represents a strategy of the company to decrease recurrent annual costs arising from purchased laboratory services by investing into laboratory infrastructure, personnel and know how.

Interviews made at Lithuanian manufacturing companies have revealed that the present laboratory infrastructure available at the companies

- is good for quality control purposes and for testing basic safety features of the products,
- but in most of the cases not satisfactory for certification purposes, to test all safety requirements of LVD.

Today most of the testing for certification purposes is done by Lithuanian and German specialised laboratories, and Russian ones, if the product will be sold to Russia. Motivations for laboratory development vary.

- Some companies would like, but *cannot* invest into the necessary laboratory infrastructure due to lack of resources.
- However, most of the companies *do not want* to develop their laboratory facilities to the point of full self-assessment capability, because
- the laboratory would be under-utilised
- and their clients would prefer anyway conformity assessed by independent bodies.

The costs of tests and the necessary infrastructure vary to a great extent. Examples:

- A large manufacturer of refrigerators spends approximately 0,001 per cent of its turnover to buy CE type conformity assessment documents from a German certification house. The service is cheap due to economies of scale and due to the fact that refrigerators are not complex from the point of view of safety. The company plans to establish a laboratory and do the assessment by himself.
- A medium sized company producing low voltage distribution equipment would have to invest also 1,5 per cent of its yearly turnover into a laboratory if it wanted to do the full range of tests needed.
- A medium sized manufacturer of TV sets spends 0,05 per cent of the production cost on EU type conformity assessment, which is contracted out to a German certification house. The company does not have the necessary capital to invest into development of its own laboratory, which would enable the company to do the testing by himself. The necessary investment would be approximately 1,5 per cent of its yearly turnover.
- Previous research has revealed that in Hungary setting up an EMC laboratory for a medium sized manufacturer of medical and telecommunication equipment costs 0,1% of its yearly turnover. Taken into consideration, that an LVD laboratory costs generally half as much, reinforces the validity of the number 0,05% given by the Lithuanian TV manufacturer.

Contracting out to specialised laboratories. It is to be expected that the majority of the LVD-generated laboratory services will be contracted out, done by specialised laboratories inside and outside the country. Most of these services will be done by the present certification houses. Therefore measurement costs for the majority of companies are to be taken into account as recurrent costs. A development of Lithuanian electrical laboratories is to be expected, including the certification houses. However, there are not many resources needed. Arguments in point:

- The costs of testing safety requirements are in the middle range of laboratory services. For example testing EMC requirements is twice as costly.
- Each of the certification houses interviewed was more or less contented with that part of its laboratory infrastructure which is necessary for testing LVD's safety requirements. If special measurements were needed, a co-operation with other laboratories could solve the problems.
- Today in Lithuania the total number of people working in specialised electrical laboratories is between 50 and 100, and even if this will double due to favourable circumstances, the necessary resources have a reasonable upper bound.

In-house laboratories. Quite independently from LVD the laboratory infrastructure of Lithuanian electrotechnic companies has to be upgraded, additional skilled manpower is needed. However, only a small fraction of this investment can be justified with the duties created by LVD. The number of persons for this activity to be hired is between 50 and 100, which has to be compared with the 30 thousand people working in these companies.

Company reactions to expect:

- For a small number of small companies the costs will be prohibitive.
- For most of the companies running their own fully equipped laboratory pays off only if the production and product is very sensitive and profitable.
- In case of a few companies, a one-time investment which amounts to maximum 1 to 2 per cent of the annual turnover will decrease the annual assessment costs by a factor of 50%.

Compliance costs for the Lithuanian manufacturers of electric equipment due to enhanced laboratory testing are

- for large manufacturers are in the range of 0,01%
 - for medium sized manufacturers are in the range of 0,5%
 - for small manufacturers are in the range of 0,1%
- of the yearly turnover.

(3) Administrative changes.

Interviews made at Lithuanian manufacturing companies have revealed that preparing, handling, storing EU type conformity assessment documents is a know-how

- which has to be learned
- or in very complex cases such as companies with a constant flow of new products a new employee has to be hired.

However,

- at typical medium size or bigger companies this can be done by the present organisation or by employing maximum one more person,
- at typical smaller companies preparing the documents can be outsourced to the same bodies which are engaged for laboratory testing, and the management and storage of these documents can be made part of routine office work.

Therefore the number of additional people to be hired

- for this purpose
- and only for this purpose

is between 50 and 100 for the whole electric equipment manufacturing industry.

Company reactions to be expected. Significant negative impact is to be expected only in case of smaller manufacturer companies.

4.3.3 How importers of electrical equipment comply

For importer companies compliance costs will be due to change of administrative activities. The assessed costs are as follows.

Table 13
Importer companies: compliance costs attributable to the measures

Activity	Magnitude of annual compliance costs on the condition that nothing else changes
LVD-related administrative activities in case of low voltage equipment	Plus 1 - 2 Million Litass
Abolishment of obligatory certification in case of household equipment	Minus 1 Million Litass

The costs were determined by the following reasoning.

The introduction of the LVD, Machinery and EMC Directives will have no effect to the importers from the countries that are importing products from the European Economic Area (EEA). The Directives are already implemented in the European Economic Area countries and manufacturers or their authorised representatives importing from these countries already have to comply with the safety requirements and provide necessary compliance proving documents. The EU has signed mutual recognition agreements due to compliance acknowledgement, co-operation and administrative help in Customs procedures with the USA, Canada, Australia, New Zealand, Switzerland, China, Japan, Hong Kong. The mutual conformity acknowledgement agreement with Japan is under preparation. Therefore while importing products from these countries there should be no additional costs for importers and impact on the amounts imported. There might be change in the import amounts coming from other / third countries, because importers and manufacturers from third countries will have to adjust to the new safety requirements and compliance procedures.

Interviews made at importer companies have revealed the unit costs of both

- the new compliance activities
- and of the activities which will not be obligatory any more.

Illustrative unit prices and occurrence magnitudes:

- Obligatory certification costs 300 to 2000 Litas, depending on whether document check has to be complemented with testing the specimen physically as well.
- A big importer company with a turnover of 30 Million Litas offers 10.000 types from EU, CIS and other countries. Annual obligatory certification cost accounts for only a small fraction of these.
- An importer and customizer of the products of a German firm pays yearly 0,1% of its turnover on low voltage goods for obligatory certification of these.

4.4 Enforcement costs

The State will have to finance the following activities.

Table 14
Government institutions and third parties: enforcement costs attributable to the measures

Activity, Institution	Magnitude of one-time investment needed, related to LVD
Additional resources for State Quality Inspectorate	0,1 Million Lt
Harmonised Standards translation and adoption by Lithuanian Standardisation Board	0,5 Million Lt.
Assessing conformity by Third Parties	2 Million Lt.

The above costs rely on the following reasoning. Much more details on the institutions affected are to be read in the chapter Institutional Analysis. The calculations below are based on the unit costs learnt in the interviews and provided by the Ministry of Economy.

State Quality Inspectorate. There are 6 people controlling electrical equipment in SQI. Enforcing LVD is closely intertwined with the enforcement of EMC and Machinery Directives. SQI is going to be reorganised into a Non-Food Inspection. Part of the reorganisation costs should be devoted to enforcing these Directives. Estimated cost: 100 thousand. Lt (training inspectors, acquisition of administration facilities and etc.)

Standardisation costs.

- *Number of standards.* Lithuanian Standards Board plans to adopt approximately 600 standards by complete translations of the whole standard and another 600 by translating only the cover. Of this total, there are 400 standards under LVD. half of them already translated.
- *Translation unit costs.* On average one Harmonised Standard has 25 pages. The costs for one Harmonised Standard to translate and adopt in Lithuanian for Lithuanian Standards Board (LSB) costs 4 thousand. Lt (160Lt/page) If the translation is made only for the cover of the standard and the standard is adopted as Lithuanian one in English language then the costs would be 50 Lt. per standard.
- *Total translation costs.* Thus costs of translating all 1200 Harmonised Standards which are still to be translated would cost $600 \times 4.000 \text{ Lt} + 600 \times 50 \text{ Lt} = 2.430.000 \text{ Lt}$. However, there are only 200 remaining standards under LVD which have to be translated and this is an estimated one-sixth of the above sum, which is maximum 500 thousand Litas.

Third Parties. The establishment of conformity assessment infrastructure in order to enforce the implemented LVD, EMC and Machinery directives would cost approximately 1600 thousand. Lt. These are to be financed from the State budget. Main items:

- Approximately 1,5 Million Lt for tangible investments: renovation of laboratory equipment and acquisition of new equipment),
- Approximately 150 thousand. Lt - for intangible investment: creating the conditions in conformity assessment institutions for being accredited, and accreditation cost.

4.5 Indirect economic impacts

4.5.1: Statistical assessment of the present trade flows and prices

It is not possible to determine exactly the volume of production and trade flows of goods under LVD. However, trade statistics and industrial statistics can be used to weight the expected impacts. In the tables that follow, export as indicated in industrial statistics is lower than export as indicated in international trade statistics. This is due to the facts that

- product group definition of international trade statistics is wider than the products manufactured in the sectors covered by industrial statistics.
- industrial companies report sales as local which may be exported later.

Table 15
Trade flows of the product group "Section XVI-84"
" Electrical machinery and equipment and parts thereof; sound recorders and producers, television image and sound recorders and reproducers, and parts and accessories of such articles"
Lithuania, 1998, Billion Lit

Direction	Imported from	Exported to
European Union	1,00	0,47
CIS	0,10	0,20
Other countries	0,65	0,29
Total	1,75	0,96

Source: Lithuanian Department of Statistics.

Table 16
Trade flows of the product group "Section XVI-85"
" Nuclear reactors, boilers, machinery and mechanical appliances, parts thereof"
Lithuania, 1998, Billion Lit

Direction	Imported from	Exported to
European Union	1,58	0,14
CIS	0,28	0,34
Other countries	0,65	0,17
Total	2,51	0,65

Source: Lithuanian Department of Statistics.

Summarising the above tables and making the necessary corrections it can be noted that for the product group under investigation, that of the total Lithuanian demand

- approximately half is already covered by EU suppliers
- less than 10 per cent of the total demand is covered by CIS suppliers
- approximately one-third of the total demand is covered by suppliers of other foreign countries
- and approximately 10 per cent of the total demand is covered by Lithuanian suppliers

The investigated regulation will influence the above trade flows and production amounts, but the extent of the influence will not be measurable, because much stronger political and economical impacts will interact with the impacts to be measured.

Price differences depending on country of origin

Electric equipment of Eastern European origin are much cheaper than their comparable Western counterparts. The difference is

- on average 30 to 40 % in case of household goods
- and even more significant in case of industrial goods.

Household goods. The big and serious shops in the cities of Lithuania offer mostly products CE marked, good quality, of companies with well known brand names such as Philips, Whirlpool, Siemens and others. To find electric household goods from Eastern European countries, products without CE mark, one has to visit bazaars or some smaller shops in the country side.

Comparing electric household goods with the same or comparable functions one finds the following price differences. The price of Western goods and Eastern European goods differs approximately on average by 30-40%. Evidently there are some cases where prices differ by 50% or even more and in the same turn they might differ in some rare case by less than 30% For example, kitchen tee-kettle costs:

- a) 56-60 Lt in the bazaar imported from Eastern countries (not only from CIS but also from China, Korea and other countries)
- b) 100-110 Lt in the shop (the same characteristics) of Western origin.

In some cases one could find products of the same company as for example Whirlpool in the shop and in the bazaar. While the former one is certified according to Lithuanian regulation, the latter one is not. The price in this case differs by 20%. This difference covers (1) costs of certification and (2) price margin, which every shop impose in order to maintain profits and cover selling administration costs.

Industrial goods. Interviews made at various manufacturing companies have revealed that there are many Lithuanian electrotechnic products for industrial use, where

- functionality is satisfactory, but
- technical solutions and design shows signs of outdated technologies.

Such products can be up to 10 time cheaper than their Western counterparts.

Price variation by marketing channel.

A few percentage variation in the manufacturing costs of electric equipment are not necessarily reflected in consumer prices. The costs of marketing the product, in particular financing the appropriate marketing channel costs (approximately 30-40% of the price) are one magnitude higher than those variations in product costs which are attributable to adjustments in order to satisfy enhanced safety requirements (approximately 1 - 5 % of the price). This relationship is clearly visible from the table below.

Table 17
Prices of household electric commodities
and differences depending on the place of sale
Lithuania, 1999

Product name	Price in professional shop (Lt)	Price in the market / bazaar (Lt)	Average difference between pieces of the same type (%)
Smoothing irons	55 - 140	50 - 100	19 - 40%
Toasters	cca. 100	cca. 75	40%
Kettles	100-140	60 - 100	40 - 50%
Electric equipment for cutting bread	cca. 170	cca. 140	21%
Mixers	cca. 80	cca. 80	negligible
Wafer bakers	124	105	18%
Hair dryers	50 - 70	30 - 49	20 - 35%
Juice wrings	250 - 320	130 - 280	20 - 70%
Circular saw	cca. 300	cca. 200	cca. 45%
Grinding machines	cca. 280	cca. 170	65%
Tape recorders	100 - 200	100 - 180	10%
Car tape recorders	cca. 140	cca. 120	20%
Average difference in prices			25 - 40%

Source: State Quality Inspectorate.

4.5.2A conceptual model for estimating the impact on the import from CIS

When making estimates on costs implied by a regulation, a set of assumptions on cost types, unit costs, and the number of recipients of the impact are needed. Cost calculation is then based on multiplying unit costs by incidences and adding up the results by cost types.

However, when making estimates on the trade flows implied by a regulation, the involvement of some kind of an economic model is inevitable.

Theoretically, the net change of CIS import of electrical equipment will depend

- on the actual additional costs to be paid by CIS companies and their representatives in Lithuania
- on the cost-elasticity of supply from CIS
- on the price-elasticity of demand on CIS goods
- and on the cross-price-elasticity of demand between CIS goods and other goods.

The following simplified model is offered to analyse the impact on the import from the CIS countries. In the model the Lithuanian market of electric goods is represented by a simplified model: by the imaginary market of the toasters. This market is regarded as segmented. It is split into two: Down-Market and Up-Market. On Down-Market, i.e. on the market of cheap goods a significant proportion of goods is imported from the CIS. The chart "Toaster Market" illustrates the hypothetical situation as follows.

- The enforced LVD regulation increases the price and thus decreases the quantity of toasters manufactured in the CIS put on the Lithuanian market. This appears in the graphics as a shift of the Supply Curve of CIS toasters upwards, indicating the fact that for the same price CIS companies are ready to put less toasters on the market.
- In the same time, on Up-Market, on the market for Western toasters the regulation does not present a real cost or price increase, therefore the Supply Curve of Western toasters does not get shifted. Also, the Supply Curve of Western toasters does not intersect with the Demand Curve of CIS toasters, in order to indicate the fact that under the given circumstances Western companies are not ready to sell for as cheap as to reach the financial possibilities of consumers of CIS toaster.

Reacting to the impacts of the downward shift of the Supply Curve of CIS toasters, consumers of CIS toasters may react as follows.

- to put up with the consumption of less CIS toasters
- or may change their Demand Curve, i.e. react to the shortage of CIS toasters with a readiness to pay more for a toaster. Thus the Demand Curve for CIS toasters will be shifted upwards to the highest point of intersection on the vertical axis, from where Western toasters may begin to substitute CIS toasters.

To the extent of the successful LVD-related Adjustment of CIS companies, the Supply Curve of CIS toasters may be shifted down gain.

The transposition of LVD will contribute to the integration of Down-Market and Up-Market.

4.5.3 Import from CIS

LVD will have the following impact on the import of low voltage electric products from CIS countries

- LVD-induced decrease of electric products imported from CIS will amount to approximately 5-15 per cent of the present import, or approximately 10-30 Million Litass.
- LVD-induced increase of prices of electric products of CIS origin will be negligible.

The above statement relies on the following reasoning.

Rules. The introduction of LVD is clearly a step

- towards not only the integration of Lithuania into EU markets
- but also it involves measures which are clearly unfavorable for mutual trade relations with CIS countries.

For example the transposition of LVD accelerates the loss of importance of GOST standards in Lithuania, which still are officially used to determine product conformity in the CIS countries.

- Most of Lithuanian companies exporting a product to the EU and to Russia as well will have to measure conformity by both sets of standards,
- and the same holds for Belorussian companies manufacturing a certain product for the local market and for Lithuania as well.

Model constraints. Lack of data makes it difficult to estimate the elasticities involved. Deeper research would also be needed to determine, to what extent Western goods are able to satisfy demand on cheaper goods imported from the CIS. In general the cross-elasticity of demand on CIS-imported goods and goods from other countries is unknown.

Costs. CIS manufacturers and their importers and legal representatives in Lithuania will face

- the same types of compliance costs as described for Lithuanian companies,
- but these costs will be somewhat higher due to somewhat higher proportion of obsolete goods among CIS products.

Price and quality. It is a well documented fact that a wide range of individual and corporate consumers in Central and Eastern Europe are

- very price sensitive
- and only to a much smaller extent quality-sensitive and safety-sensitive.

Imported CIS products

- have a very good position in the price competition,
- but have a worse position regarding the competition in
- quality,
- brand name building
- and safety.

In fact, this latter competition is regulated by the transposition of LVD. However, consumers will not necessarily feel the price consequences of the above changes. One of the reasons is that the share of marketing costs within total product costs and the profits related to market these goods are high. Price increase will be dampened by eventual decrease of profit margin: during the LVD-related adjustment period of these products the profit on the trade will decrease to a certain extent.

Quantities. Russia, Ukraine and Belorussia are traditional sources of electric equipment for Lithuania. The majority of the existing stock of electric products in Lithuanian households, companies and institutions is of CIS origin and consequently needs components from the original manufacturers. In spite of well developed, traditional trade relations, the position of suppliers of electric products of CIS countries has been very much weakened during the last years. However,

- due to their cheap prices (on average 30% cheaper than prices of comparable Western goods)
- and due to the fact that economic relations between Lithuania and CIS countries are still strong, with a trade surplus of Lithuania in many trade groups their position is not likely to further weaken.

Import from CIS countries has a much higher volatility than the amounts attributable to LVD.

Generally and on the long run the steps towards integrating Lithuania into EU markets are not likely to decrease the volume of trade flows to and from the CIS countries. International experience shows that the integration of country "A" into a customs union

- while decreases the share of country "B" (which is outside the customs union) from the total import of country "A",
- this does not imply necessarily that the import from country "B" to country "A" will decrease, because as a rule, economic growth generated by the customs union induce the growth of import from country B.

4.5.4 Import from the EU

EU import growth of electrical equipment attributable to the transposition of LVD will have the magnitude of 10 to 20 Million Litas which is less than 0,1 per cent of the present import volume.

The above statement relies on the following reasoning.

The present volume of EU import is approximately 2 Billion Lt. The contribution of EU suppliers to satisfy Lithuanian demand of electrical equipment is already twice as much than the trade flows mostly affected by the measures, i.e. local production sold locally plus the import from CIS countries taken together. LVD-induced growth of imports from EU

- will not be driven by the cost reductions to EU producers or importers,
- but by the extra demand arising from LVD-induced decrease of goods put on the Lithuanian market by Lithuanian and CIS producers.

The position of EU companies as suppliers of electric products in Lithuania is very strong: this country group supplies half of the local demand. The transposition of LVD will strengthen the competitive position of these companies towards companies of other countries. This will be attributable to the following facts.

(1) Product and technology changes due to enhanced safety requirements. The majority goods offered by EU based companies, in particular the vast majority of goods offered by EU companies with well known brand names satisfy the safety requirements of LVD. Thus the product composition according to obsolescence or safety for use is better than in case of Lithuanian or CIS companies. Therefore the enhanced safety requirements as expressed in the change from the previous requirements to the safety requirements of LVD are not really effective on the vast majority of EU companies. True, there are EU companies which export goods without CE mark to Lithuania with cost cutting considerations behind these transactions. However, the proportion of products where a re-design due to enhanced safety requirements is needed, is low.

(2) Administrative changes. Here the cost difference between obligatory certification and EU type conformity assessment procedures have to be taken into consideration. On average both of the above costs are limited to the magnitude of one thousandth of product costs in case of medium and big companies. These costs are divided between manufacturer and importer. The majority (but not all) of the products which are put by EU companies on the Lithuanian market are marketed in the EU as well. For products marketed both in the EU and Lithuania Declaration of Conformity and Technical Documentation as demanded by LVD are already available. For existing and new products the know how of preparing, storing and managing these documents is available.

None of the enterprises interviewed has mentioned that they had had to change the safety features of the products, because

- Lithuanian safety requirements would be more severe than accepted European safety requirements
- Safety requirements towards imported products would be different from safety requirements towards Lithuanian products.
- The difference in European and Gost (Soviet) standards would make any difference in safety requirements.
- Testing and certification would not use the same standards in case of imported goods and Lithuanian goods.

The only technical barrier to trade importers are experiencing is that certification

- is expensive
- must be repeated for the same type (double certification)
- non-transferable between companies
- time consuming.

For the above reasons

- the cost reduction for EU manufacturers and importers of goods of EU origin is negligible
- but a certain competitive edge for EU based companies is to be gained as opposed to Lithuanian and CIS companies, which have many types compared to their turnover and have difficulties in adjusting to the new conformity assessment system.

The change in trade flow of electrical equipment from the EU will depend, but also will be limited by the above competitiveness gain.

4.5.5 Lithuanian production put on the Lithuanian market

It is estimated that as a short term consequence of the measures Lithuanian producers on the local market

- will gain market share from CIS companies (some 10 to 20 Million Litass)
- but will lose a comparable amount to Western companies
- and that the two impacts will neutralise each other.

However, on longer term LVD-related adjustment will serve the increase of production.

The above statements rely on the following reasoning.

The present position of Lithuanian companies on the Lithuanian market of electrical equipment is weak. Their market share amounts to approximately 15%, or 400 Million Lit. Variability of products is limited, and product development lags behind foreign competitors - these facts are well illustrated by the fact that only 4% of new types introduced on the local market is of Lithuanian origin.

The short term competition analysis relies on the assumption that the present preparedness to LVD of Lithuanian companies is

- better than their counterparts in CIS
- and worse than their counterparts in developed countries.

This impression was reinforced during the visits in large Lithuanian companies.

- A large refrigerator company and a medium sized TV set company manage conformity assessment with a combination of in-house and outsourced testing and administrative activities like any EU company would do
- A producer of cables is in the course of developing its EU type conformity assessment procedures,
- A medium sized manufacturer of packing machines will need substantial change of conformity assessment procedures.

The LVD-generated change in this particular trade flow depends

- on the compliance costs for Lithuanian electrotechnic industry (see in a separate chapter)
- on LVD-generated change of quantities and prices of CIS import (see in a separate chapter)
- and on cross-price-elasticities of local demand between CIS products, developed countries' products and Lithuanian products.

4.5.6 Export to the EU

This impact

- will be positive, in the range of 20 to 30 Million Lit., but
- it will be felt only on the longer term, with an increasing tendency over time.

The statement relies on the hypotheses below.

Quantities. About one-third of electrical equipment produced in Lithuania is already exported to the EU, the present export volume of low voltage electrical equipment to the EU is approximately 300 Million Lit. The measures will improve the image of Lithuanian products in the EU. However, the bulk of LVD-related impact on the EU markets will be felt not so much in the range of product types which are already being exported to the EU, but in case of

- products which are today only being sold locally and exported to the CIS or other countries
- or products which have not been developed yet.

The survey has shown that the possibilities here are wide. A case in point is a large Lithuanian manufacturer of electric measures which exports its products to every part of the world - except to the EU. If LVD-related upgrading will be performed in this company, the EU market will be opened for it.

Quality and safety. Lack of product safety is seldom the only reason why many of Lithuanian production cannot enter EU markets, because the typical goods that cannot be sold in the EU have other disadvantages of obsolescence, functionality, quality and design as well. Impact should be estimated only for goods which need upgrading only in terms of safety requirements and which are upgrade-able in fact.

Costs and prices. LVD-related Adjustment will involve about 3% cost increase in case of upgrade-able goods. However, Lithuanian goods are much cheaper than EU goods of comparable functionality, and European clients are less price sensitive than Central and Eastern European clients.

4.5.7 State revenues

The impact on State revenues is in the range of 1 Million Lit.

The above statement relies on the following hypotheses.

Government revenue change = change of taxes on low voltage electric equipment + value of the standards under LVD sold.

Tax revenue change = profit tax change of Lithuanian manufacturers + profit tax change of importers.

Profit tax change of Lithuanian manufacturers

- on the short term will be negligible because positive and negative impacts on the turnover will neutralize each other
- on the longer term will be 24% (tax rate) of 10% (profitability) of 30 to 50 Million Lit, i.e. 1 Million Lit.

LVD-generated profit tax change of importers will be negligible.

The value of standards sold will also be negligible for the following reasons. Lithuanian Standards Board estimates that they will sell approximately 35.000 standards for enterprises for the unit price of 34Lt. This is the total of all standards sold, of which standards under LVD make up one-sixth. Thus the total amount received for standards sold from the enterprises would be 1.190.000 Lt. Costs for printing and selling of the standards for the LSB would be 390.000 Lt. Therefore the selling of standards would give 800.000 Lt profit which will be transferred to the State budget. Only one-sixth of this value is due to LVD standards, and this is not an annual revenue! From LVD-related standards annually rather a few tens of thousands of Lit are to be expected.

4.6 Risks

The most significant risk is that irresponsible companies with an aim of cutting their costs put goods with or without CE mark on the market, which are not safe for use.

What is at stake can be seen from the following tables on fires, which asserts that approximately 1500 fires are caused by infringement of the rules regarding electric equipment installation and usage, of which on average 10% is caused by shortages in construction and design, attributable to the manufacturer's fault. In other words, yearly 150 fires are caused by unsafe products.

Table 18
Fires caused by infringement of rules on electricity. Lithuania, 1993 - 1999
Number of fires

Fire causes	1993	1994	1995	1996	1997	1998	1999
1 Shortages in construction and design, manufacturer's fault	111	145	153	206	187	154	85
2 Infringement of installation rules	133	154	157	182	128	160	173
3 Infringement of usage rules	703	792	802	838	885	940	1 037
4 Infringement of fire - prevention and safety rules while using an electric apparatus / equipment	305	273	274	275	281	253	254
Total:	1 252	1 364	1 386	1 501	1 481	1 507	1 549
Dynamics (1993=100%)	100%	109%	111%	120%	118%	120%	124%
Dynamics (previous year=100%)	-	109%	102%	108%	99%	102%	103%

Table 19
Fires caused by infringement of rules on electricity. Lithuania, 1993 - 1999

Composition of fires by causes

Fire causes	1993	1994	1995	1996	1997	1998	1999
1 Shortages in construction and design, manufacturer's fault	9%	12%	12%	16%	15%	12%	7%
2 Infringement of installation rules	11%	12%	13%	15%	10%	13%	14%
3 Infringement of usage rules	56%	63%	64%	67%	71%	75%	83%
4 Infringement of fire – prevention and safety rules while using an electric apparatus / equipment	24%	22%	22%	22%	22%	20%	20%
Total:	100%	100%	100%	100%	100%	100%	100%

Table 20
Fires caused by infringement of rules on electricity. Lithuania, 1993 - 1999

Amount of loss caused by fires (Thousand Lt)

Fire causes	1993	1994	1995	1996	1997	1998	1999
1 Shortages in construction and design, manufacturer's fault	106	263	2 136	1 043	501	646	436
2 Infringement of installation rules	105	520	496	722	716	834	811
3 Infringement of usage rules	1 611	1 710	2 958	2 931	3 557	3 781	4 357
4 Infringement of fire – prevention and safety rules while using an electric apparatus / equipment	314	303	451	626	689	628	820
Total:	2 136	2 797	6 041	5 323	5 463	5 888	6 424

Table 21
Fires caused by infringement of rules on electricity. Lithuania, 1993 - 1999

Deaths during fires

Fire causes	1993	1994	1995	1996	1997	1998	1999
1 Shortages in construction and design, manufacturer's fault	1	0	4	1	2	0	2
2 Infringement of installation rules	4	0	1	2	0	1	0
3 Infringement of usage rules	5	14	14	6	13	11	13
4 Infringement of fire - prevention and safety rules while using an electric apparatus / equipment	27	24	29	17	19	15	19
Total:	37	38	48	26	34	27	34

Table 22
Fires due to electricity: Injuries during fires (Number of people including firemen)

	Fire causes	1993	1994	1995	1996	1997	1998	1999
1	Shortages in construction and design, manufacturer's fault	3	0	0	0	7	1	0
2	Infringement of installation rules	3	2	6	1	1	0	3
3	Infringement of usage rules	4	16	14	25	14	17	22
4	Infringement of fire - prevention and safety rules while using an electric apparatus / equipment	7	8	6	10	5	8	11
	Total:	17	26	26	36	27	26	36

It is not possible to determine, how effective is the present system in stopping defect goods. Lithuanian Market Surveillance asserts that it filters out 30% of the goods as non compliant. However, this number contains also goods with incomplete documents and it is based on the statistics of targeted raids. The real proportion of defect goods on the Lithuanian market is much less. All Certification Bodies assert that they filter out 30% of goods to be imported as non compliant.

Although enforcers in many countries say so, it is impossible to statistically determine, whether the abolishment of obligatory certification contributes to the extent of this risk. Hungarian statistics on targeted raids in stores, performed by the twin organisation of SQI in 1999 (by the Hungarian Consumer Protection Inspection), revealed that two-third of controlled household electric machines and Christmas tree lights (42 out of 65) were unsafe (see in the chapter on LVD in Hungary) and that the proportion of defect goods is on the rise since LVD has been introduced in Hungary.

It is very important that the powers lost by the third parties should be transferred to Market Surveillance and this reinforced with Market Surveillance's improved access to laboratories, know how and the help of Customs Offices.

5. Legal Analysis

5.1 The re-arrangement of the Technical Barriers to Trade

The adoption of LVD is one of a series of measures which in the countries integrating into the EU replace

- an outdated system of technical regulations which have also lost their relevance due to the re-directing of trade flows
- by a more contemporary, more transparent system of technical regulations of trade, a system which has also the advantage of being shared by the most important international trade partners of Lithuania.

The acceptance of uniform, harmonised technical regulations in the European Economic Area is beneficial for the free movement of goods, quite independently from the safety requirements of the regulations concerned. It can be regarded as a re-arrangement of some technical barriers to Lithuania's trade, to facilitate exchange with its major trade partners.

Regulation principles. International product flows are regulated by trade policies. Trade policy has various classical tools such as

- customs, quotas and anti-dumping measures
- and the removal of these barriers to trade.

Beyond the policy tools mentioned above, product flows are also regulated by technical barriers to trade (TBT). This is the term used by the World Trade Organisation¹ (WTO) meaning technical regulations such as standards and conformity assessment procedures.

There has always been a trade-off between the principles of

- free trade on the one side
- and the protection of human, animal and plant safety and health, of the environment, in particular the interests of consumers on the other side

TBT are supposed to satisfy this latter set of aims. Increased regulatory policy can be seen as the result of higher standards of living world-wide, which have boosted consumers' demand for safe and high-quality products, and of growing problems of water, air and soil pollution which have encouraged modern societies to explore environmentally-friendly products. Other objectives of regulations are quality and technical harmonization. Quality regulations - e.g. those requiring that vegetables and fruits reach a certain size to be marketable - are very common in certain developed countries. Regulations aimed at harmonizing certain sectors, for example that of telecommunications and terminal equipment, are widespread in economically integrated areas such as the European Union.

However, in recent years, the number of technical regulations and standards adopted by countries has grown significantly. In a world characterised by free trade TBT are not supposed to be the tools of trade policy, but tools of other policies such as consumer protection and environment protection.

The WTO TBT Agreement. In 1994 members of the WTO have agreed to avoid *unnecessary* obstacles to trade. The main provisions of the TBT Agreement are as follows.

On the one side technical regulations are recognised as legitimate tools of

- protecting the safety and health of human, animal and plant life, of the environment
- and preventing deceptive practices by protecting the consumers through information, mainly in the form of labelling requirements, appropriate packaging and measurements.

On the other side the members have agreed that they shall ensure that technical regulations

- are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade
- shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create.
- are accompanied, wherever appropriate by risk assessments based on available scientific and technical information, related processing technology and the intended end-uses of the products
- will be based on product requirements in terms of performance rather than in terms of design or descriptive characteristics.

Cost reduction. The harmonisation of technical regulations is beneficial to trade, because the main impacts of TBT is that

- divergent technical regulations varying from country to country
 - and non-transparent and discriminatory conformity assessment procedures
- cause costs for exporters. Non-transparent and discriminatory conformity assessment procedures can become effective protectionist tools and cause losses of economies of scale. If a firm must adjust its production facilities to comply with diverse technical requirements in individual markets, production costs per unit are likely to increase. This imposes handicap particularly on small and medium enterprises. The high costs involved may discourage manufacturers from trying to sell abroad. In the absence of international disciplines, a risk exists that technical regulations and standards could be adopted and applied solely to protect domestic industries.

The following costs are usually attributed to TBT:

- Evaluation costs. Companies must evaluate the technical impact of foreign regulations, translate, explain and disseminate product information, hire or train experts. Exporters are normally at a disadvantage vis-à-vis domestic firms if confronted with new regulations.

¹ This chapter relies on the Internet web page of the World Trade Organisation.

- Adjustments costs. Production facilities and products have to be adjusted to comply with the requirements.
- Conformity assessment costs. When all the above is done, product compliance with technical regulations generally needs to be confirmed. There is the need to prove that the exported product meets the foreign regulations. This may be done through testing, certification or inspection by laboratories or certification bodies, usually at the company's expense. These are aggravated by the costs of multiple testing.

5.2 LVD as a vertical EU Directive

To achieve the goal of free movement of products, the harmonization of the regulations of individual member states was necessary. The ways of harmonization have developed over the decades.

- *Old Approach:* Until 1985 the European standardisation organisations (in charge of electric products: the CENELEC) have written the standards, the standards were implemented into directives, and the directives were transposed into the laws of the member states. Thus, in essence, standards-making bodies were writing the laws in Europe.
- *New Approach:* In 1985 the EU has adopted the so-called New Approach under which safety objectives are reached through the enforcement of a set of generally worded essential health and safety requirements (EHSRs), which lay down in broad terms the requirements the equipment must meet. These EHSRs are supported by so-called Harmonized Standards which however are not listed in the directives. Harmonised Standards are published separately and the list may change due to the technical development process. They are developed by European standards-making bodies involving manufacturers, users and regulators.

LVD is a vertical or sectoral Directive. Vertical or sectoral regulations interact with the horizontal laws. Such vertical regulations are in the process of being transformed into EU-compatible regulations. If to the product there are other relevant vertical (sectoral) Directives, which are transposed into Lithuanian law, then in case of these products the impact of LVD interacts with the impact of these Directives. Thus, in case of many electrical equipment

- Machinery Directive
- Electromagnetic Compatibility Directive
- Construction Products Directive
- Telecommunication Terminal Equipment Directive
- and / or the Gas Appliances Directive

are relevant as well and the impacts usually interact. Most often it is useful to estimate the joint impact of EMC and LVD Directives, because for most of the relevant products they usually are applied together.

5.3 The regulation to be introduced

The Low Voltage Directive (LVD) provides requirements for the free movement of those electric and electronic goods between certain voltage limits, which are safe for use.

LVD has been transposed to the Lithuanian Legislation by the Resolution of the Minister of Economy and Director of Lithuanian Standards Board of 19 October 1999, No. 351/61 „Concerning confirmation / acknowledgement of the regulation of electric equipment safety”. The Lithuanian LVD is called „The technical regulation of electric equipment” confirmed by the Resolution No. 351/61 of the Minister of Economy and Director of Lithuanian Standards Board of 19 October 1999.

LVD (Directive 73/23/EEC or Council Directive of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits) has been in force since more than a quarter of a century in the European Economic Community, which was later to become the European Union. The Directive was established under Article 100 of the Treaty of Rome (1957) which has established the European Economic Community. This Article deals with placing products on the market, putting them into service within the EU and the free movement of goods across national boundaries. It is not directly concerned with product safety, but the safety of the product appears in the provisions as a precondition of free movement of the product.

As part of the legal harmonization process, LVD has been transposed into Lithuanian law. The main legal provisions of the regulation and their explanation is as follows.

- Free movement in Lithuania is granted to those and only to those electric and electronic products, which satisfy the requirements of all Directives which are relevant to the product, provided that the Directives have been introduced to Lithuanian law. Free movement of these products means that Lithuanian Government bodies may not stop the manufacturer or importer company to put the product on the market. However, free movement does not mean that business entities must accept the product as satisfying the requirements (such as safety) of the relevant Directives. Business entities may demand additional tests and certification for the product if they wish to do so.
- Before being put on the market, the conformity of all electrical equipment within the scope of the regulation must be assessed. The main elements of the conformity assessment procedure are:
- Product conformity according to the LV Directive is to be declared by the manufacturer or his authorised body in Lithuania by preparing EU-type Declaration of Conformity.
- A Technical Documentation must be prepared by the manufacturer to prove that the equipment complies with the requirements of LVD.
- Before it is placed on the market, the electrical equipment must have the CE mark affixed by the manufacturer or his authorised representative. CE mark may be put on the product only if the requirements of all Directives relevant to the product are fulfilled. Free movement of goods in the EU is granted to those and only those electric products, which have CE mark attached to them and thus are presumed to satisfy all requirements of all Directives relevant to the product.
- The compilation of the technical documentation and the necessary testing may be done *either* by the manufacturer *or, alternatively*, by a third party institution, e.g. a certification house which is notified to perform certification according to LVD.
- The Technical Documentation and the Declaration of Conformity must be available for at least 10 years for inspection purposes by the authorities. In case the product is challenged, a Report on the compliance of the product drawn up by a notified body and attached to the Technical Documentation is useful but the preparation of such a Report is not obligatory.
- Declaration of Conformity according to the LV Directive must be based *either* on harmonised standards *or, alternatively*, on a description of the technical solution with or without applying standards, which proves that the product has been manufactured in conformity with the 11 safety objectives of the Directive.
- Compliance of the product by Harmonised European Standards is a sufficient condition (but not a necessary condition) for issuing a Declaration of Conformity. Compliance of the product by national standards is the sufficient condition of the product to be placed on the market only if these standards cover all safety objectives of LVD. EU Member States or States which have introduced LVD may not demand compliance by national standards as a necessary condition for the product to be placed on the market, i.e. standards or any national specifications may not have a mandatory status.
- Conformity assessment documents are directive-specific and certify only the conformity of the product to the requirements of a Directive. For example, in case of LVD the directive-specific requirement means the 11 safety objectives as described in LVD. Alternatively, in case of EMC the directive-specific requirement means active and passive electromagnetic compatibility. CE mark signifies for the authorities that the product has satisfied all requirements which are listed in all Directives which are relevant to the product. However, neither the CE mark, nor the Directive-specific certification documents neither express a statement on quality, nor do they guarantee the quality or the safety of the product.

5.4 Relationship between the new regulation and Lithuanian horizontal regulations

The impact of the LVD interacts with other

- vertical
- and horizontal regulations.

There are horizontal Directives, transposed into Lithuanian law, of which the impacts also interact with the impact of LVD (or with that of transposed LVD, i.e. Technical Regulation of the Ministry of Economy and of the Standardization Department, October 1999, No. 351/61) Thus, transposed Directives

- for the procedure of compliance assessment
- for marking
- for managing the manufacturing process
- for market surveillance,
- for general product safety

have impacts which cannot and need not have to be separated from the impact of LVD.

Law on the Conformity Assessment of the Republic of Lithuania. This law adopts the main provisions of the relevant documents of the European Union relating to the so called Global Approach. It creates preconditions for the establishment of agreements on the mutual recognition of the results of the activities of conformity assessment bodies. The Law No. VIII – 870 was approved by the Parliament of the Republic of Lithuania at 6 October 1998. It regulates activities such as

- accreditation,
- testing,
- certification,
- inspection,
- supplier's declaration.

The Law defines the structure of the conformity assessment system, subjects of conformity assessment, functions of the participants of the system and their responsibilities as well as another issues.

Another horizontal law of this field is *EU Directive 93/645/EEC* on the modular approach to conformity assessment, which has been transposed to Lithuanian legislation by the Government Resolution 4 March 1998 Nr.11.

The Law on Product Safety of the Republic of Lithuania (No. VIII-1206 of 1 June 1999) regulates the control of the compliance with Product Safety Requirements. This law will come into force only from the 1st January 2000. It establishes general product safety requirements, fundamentals of state and public control over product safety, procedures for the provision and transfer of information on unsafe products, rights of producers, sellers and service providers and their responsibility for the presentation of unsafe products on the market of the Republic of Lithuania. It states that only safe products should be presented on the market. According to this law, Government operated food and non-food product safety control institutions - which were divided previously - should be unified. It defines „product placement on the market” as notion than sale: product placement means sale, import, rent, service provision, or other method of transfer. Thus control of products is not confined to control over exported/imported products.

The Law on Product Safety regulates the case when Market Surveillance stops an otherwise safe product. In this case the company can appeal to the Court.

The Law on Product Safety has transposed most, but not all of the provisions of the relevant EEC and EU Directives. 17 out of 19 articles of the Council Directive on Product Safety 92/59/EEC and 18 out of 22 articles of the Council Directive on Responsibility for Defective Products 85/374/EEC have been transferred, fully or partially, to the Law on Product Safety of the Republic of Lithuania. Procedures for the exchange of information about unsafe products are provided for in the Council Directive on Product Safety 92/59/EEC. Article 7 of the Law on Product Safety of the Republic of Lithuania does not explicitly impose responsibility for the co-ordination of activities and reporting of information.

5.5 Lithuanian vertical regulations to be abolished due to transposition of LVD

The following four Regulations were established regarding the obligatory certification system for household equipment.

(1) The Decision of the LG² of 22 June 1992 No. 474 „Concerning obligatory household electrotechnical products’ certification” (SN³ 1992, No. 24-729);

This was the first regulation, which was passed in order to ensure that consumers are provided with safe, not dangerous for health and life and environmentally friendly production. The regulation provided for to start obligatory certification form 01/09/1992. The list of products was provided (only general names without commodity codes and the respective standards, as e.g. juice wrings, mixers and etc.) in this regulation. The Standardisation Service was charged to prepare certification and marking rules. The ministries were charged to inform and oblige the enterprises to submit their manufactured or traded products that fall under this regulation into Certification Bodies in order to be tested and certified. The regulation prohibited selling the electric equipment from 01/04/1993 if they are not certified and marked according to the rules. The State Quality Inspection was obliged to inspect the quality of the certified products.

(2) The Regulation of the Ministry of Economy of 20 June 1997 No. 202 „Concerning obligatory certification of household electrotechnical products” (SN 1997, No. 60-1430)

The regulation was passed in order to foster Lithuanian integration into the EU and other countries’ markets and to protect the consumers from the dangerous / unsafe electric equipment. The Minister of Economy by this regulation confirmed (1) the list of products that should conform with the existing standards (the list contains names of the products, CN commodity codes and relevant standards), (2) that certification procedure should be carried out according to the rules provided for in the Standardisation Document SD 5.1-92, (3) that obligatory certification system is not applicable to not new / used / second hand electric equipment, but in this case the trader / seller should officially declare that the equipment is not new.

(3) The Regulation of the Ministry of Economy of 16 October 1998 No. 360 „Concerning obligatory certification of household electrotechnical products” (SN 1998, No. 93-2597)

This regulation amended the previous ones. The initiative to amend the previous regulations was induced by the LG resolution of 17 September 1998 No. 1122 concerning temporary economic measures applicable in order to enhance Lithuanian export, protect local market and enhance the positions of Lithuanian manufacturers within it. This regulation provides for that starting from 01 January 1999 all the products that were provided in the list of the previous regulation are prohibited to enter Lithuanian market if they do not have Lithuanian certificates or the certificates issued by the acknowledged certification bodies from other countries assuring that these products comply with safety requirements. These requirements are not applicable to the second hand goods, in which case the importer should declare this fact officially. The method of proving the fact of "usage in non-household environment" was introduced: Certification Bodies were entitled to issue such documents which gave the proof of the product not being under the scope of obligatory certification. All the products, which have proper documents, might enter Lithuanian market by undergoing the so-called "free movement" customs’ procedure.

(4) The Regulation of the Minister of Economy of 18 February 1999 No. 66 „Concerning the partial amendment of the Regulation of the Ministry of Economy of 20 June 1997 No. 202 „Concerning obligatory certification of household electrotechnical products”” (SN 1999, No. 19-547);

² Lithuanian Government (LG)

³ State News – the official State publication on Lithuanian legislation

This regulation already introduced more liberal procedure for „CE” marked goods while entering Lithuanian market from the EU and EFTA countries, according to Lithuania's agreement with the EU on associated membership. If the equipment listed in the annex of this regulation enters the Lithuanian market with the „CE” mark, the importer should provide a Declaration of Conformity issued by the EU or EFTA countries manufacturer or notified bodies and should then freely enter the market without Lithuanian certificate. By this regulation the list of regulated equipment / products was broadened by introducing some new CN commodities groups and specifying the ones that appeared in the previous regulation. It was also mentioned that for some product groups provided for in the regulation the obligatory certification system is not applicable if these products are declared by the importer to be non household but capital goods or use lower than 50V alternating current or lower than 75V direct current.

The following Regulations are dealing with other group of products than previous four Regulations did. These are mainly radio, TV sets, record players and others. The first regulation concerning obligatory certification of this product group was introduced in 1995 and actually came in force in 1996. Later amendments were following, analogous to those for household electric equipment (The Regulation No. 359 introduced the same changes as the Regulation No. 360 concerning household electric equipment, the Regulation No. 95 is analogous to the Regulation No. 66, only the range of products regulated differ).

(5) The Regulation of the Ministry of Industry and Trade and Lithuanian Standards Board of 29 June 1995 No. 160/144 „Concerning obligatory conformity certification of household common use electric apparatus” (SN 1995, No.66-1640);

(6) The Regulation of the Ministry of Economy of 16 October 1998 No. 359 „Concerning obligatory conformity certification of household and common use electric apparatus” (SN 1998, No. 93-2597);

(7) The Regulation of the Minister of Economy of 9 March 1999 No. 95 „Concerning the partial amendment of the Regulation of 29 June 1995 No. 160/144 „Concerning obligatory conformity certification of household common use electric apparatus”” (SN 1999, No. 25-720);

The following Regulations concern computer equipment and cash apparatus. The Regulation No. 678 provided for that starting 1 July 1998 the obligatory safety and EMC certification system for placing computer equipment and cash apparatus in the local market would be introduced in Lithuania and the SQI was charged for controlling. The Regulation No. 164 empowered State Enterprise „Infostruktura” as the winner of the tender held before to perform certification of the regulated under the Regulation No. 164 equipment. The amending Regulation No. 856 prohibited the imported goods without certificates to enter the market since 1 July 1998 and for locally produced goods to be placed in the market without certificates starting from 1 December 1998.

(8) The Decision of the LG of 26 June 1997 No. 678 „Concerning obligatory certification of computer equipment” (SN 1997, No. 61-454);

(9) The Decision of the LG of 9 July 1998 No. 856 „Concerning the partial amendment of the Decision of the LG of 26 June 1997 No. 678 „Concerning obligatory certification of computer equipment”” (SN 1998, No. 63-1820);

(10) The resolution of the Ministry of Communications of 9 December 1997 No. 164 „Concerning obligatory certification of computer equipment” (SN 1997, No. 115-2939)

5.6 Summary of Legal Analysis: the differences between transposed LVD and the present regulation

These differences are very important to analyze because regulatory impact analysis measures the impact of these differences.

The present Lithuanian regulations differ in 3 aspects from the provisions of LVD (or its transposed form, Technical Regulation of the Ministry of Economy and of the Standardization Department, October 1999, No. 351/61). There is (1) a difference in scope (2) a difference in the safety requirements and (3) a difference in the conformity assessment procedures.

(1) Scope:

- (1.1) The main difference regarding the scope means the following. Today in Lithuania only (a) household electric equipment, household electronic apparatus, (b) computers and computer related equipment (c) cash register apparatus and (d) radio electrical equipment needs to be certified in an obligatory way, if the equipment operates over 50 V (alternating current) or 75 V (direct current). Other electric and electronic products e.g. industrial products are not covered by the present regulation. However, the scope of the LVD directive and its transposition into any national law is defined by voltage limits (between 50 and 1000 V for alternating current and between 75 and 1500 for direct current), independently from whether the device is to be used in households or elsewhere.
- (1.2) Components are not under the scope of obligatory certification. However, as a general rule, *components* of equipment are included into the scope of LVD, especially if their safety assessment is feasible or if the component is marketed as a separate product. However, the exact definition of the scope contains some exceptions from the above rules and is to be read in the text of the Low Voltage Directive and in the Application Guidelines, July 1997.
- (1.3) Used / second hand products are exempted from obligatory certification. However, LVD does not makes such an exemption.

(2) Safety requirements: The main differences regarding the safety requirements are as follows.

- (2.1) Under the present regulations (a) safety requirements and (b) the methods of assessing safety are expressed in terms of standards. However, under the Directive (a) the safety requirements are expressed by the 11 safety objectives of the Directive must be fulfilled regardless whether there is an available Harmonised European Standard expressing it or not and (b) the method of assessing safety can be chosen alternatively by using Harmonized European Standards or other methods.
- (2.2) No extra safety objectives stronger than those expressed in the Directive may be demanded from manufacturers by Lithuanian authorities.

(3) Conformity assessment procedures:

- (3.1) While today for all goods covered by the scope of the present regulations there is an obligatory certification system in Lithuania, the transposed LVD Directive gives an option to the manufacturer or the importer to declare product conformity by himself with or without the involvement of a third party certification institute.
- (3.2) While today a certification document issued by a third party institution is a satisfactory proof of conformity, under the new regulation the 3 main elements of conformity assessment procedure will be required: Technical Documentation, Declaration of Conformity and CE Marking.

6. Institutional Analysis

6.1 An overview of the institutionalisation of the defence against unsafe products

The regulations on the protection of the Lithuanian market against unsafe electrical products are enforced by the following institutions.

- *State Quality Inspection* has the legitimation to allow free sale or to stop the circulation of electrical goods, depending on their safety for use and whether they are provided with certification documents proving their conformity to safety requirements.
- *Lithuanian Customs Department* has the legitimation to allow free circulation or to stop the circulation of electrical goods to be imported, depending on whether they are provided with certification documents proving their conformity to safety requirements.
- *Certification Bodies* are so-called "third parties", which means that they are outside the public administration but perform administrative tasks on behalf of the authorities. They have the legitimation to issue or to deny certification documents to products under the scope of obligatory certification, depending on their safety to use or on whether the products are provided with certification documents issued by recognised certification bodies. Certification is issued or denied based on standards.
- *National Accreditation Bureau* issues accreditation documents of Certification Bodies.
- *Lithuanian Standardisation Board* has the legitimation to approve or to abolish Lithuanian standards and other standard documents related to the safety requirements of electrical equipment and to the testing methods of safety.
- *Ministries* are responsible for supervising the activity of these institutions, to exercise the rights of founders, and to designate certification bodies.
-

6.2 State Quality Inspectorate

6.2.1 Institutional arrangement

State Quality Inspectorate was established on 1991.12.02 by Resolution No. 519 of the Government of the Republic of Lithuania. This Regulation was approved on 1992.05.06 by Resolution No. 390 of the Government of the Republic of Lithuania. SQI is subordinated to the State Competition and Consumer Protection Office. SQI is financed by the State budget and by not budgetary funds.

At the present moment the Market Surveillance system in Lithuania is undergoing reorganisation, and this is true for SQI as well. According to the plans of the Ministry of Economics SQI should be reorganized into Non food Products' Inspectorate and this reorganisation would cost 1,5 mln Lt for the State Budget. SQI can be regarded as an institution under reconstruction regarding the legal framework, the organisation, the linkages and the dependencies as well. The surveillance of certain market sectors (foodstuffs, chemicals) is almost in full conformity with the main EU requirements, while that of some others (conformity assessment and standardisation, cosmetics, detergents, building products) is still exercised based on the old legal framework or lacks legal regulation.

The control object of SQI is as follows: To control that enterprises and natural persons when manufacturing or selling products and services, supply the consumers with products and services

- ·not harmful to health,
- ·not dangerous to life,
- ·safe for use
- ·and not contaminating the environment.

The tasks of this institution are as follows.

- ·To make expert examinations of quality, origin and completion of products, including exported and imported products.
- ·To take part in assessing the preparedness of enterprises to manufacture products which comply with the normative requirements, to take part in certification of production processes, to take part in issuing production permits.

- To check how the quality and amount of products and raw materials are established, or payments are made for products sold.
- To consider complaints and proposals of the citizens and enterprises concerning the product quality, to examine consumers' complaints on the violations of their rights as regards the quality of goods and services.
- To provide consultations to consumers on goods and services and to organize systematic information of consumers on the quality of goods and services.
- To provide proposals to the Lithuanian Standardization Department concerning the right to mark manufactured products by a special mark that they conform to the normative technical requirements. To control how the regulation on the provision of this for mark is followed.

The rights of SQI are as follows:

- With the purpose of control, upon presenting an official certificate to visit without hindrance all enterprises located in the territory of the Republic of Lithuania (also natural persons), which manufacture and sell products (provide services);
- To familiarize free of charge with technical documentation used in the production and applicable standards of the inspected enterprise (natural persons);
- To select and take product examples (samples) in the established procedure for quality checking, to delegate laboratories of enterprises to conduct immediately tests and analysis of taken examples (samples);
- To check how quality and quantity of products and raw materials are identified, if payments for the products sold are made according to their quality, if together with the supply documents of products to be certified quality certificates are provided;
- To control the quality of certified products;
- To participate in the established procedure in the work of laboratories, inspecting product (service) quality, and attestation commissions;
- At the request of one of the parties to consider and settle disagreements between the supplier and recipient due to product quality and quantity;
- To participate in the work of tasting commissions and in the case of a dispute to demand that products would be presented for laboratory analysis;
- To participate in acceptance and periodical tests of products that have been started to be produced;

If the manufacturer, seller, or provider of services violates the obligatory requirements of the normative documents declared or established by the Government of the Republic of Lithuania, SQI is entitled:

- To stop the manufacturing, sales and supply of products (provisions of services) or to prohibit to sell the stock of products;
- To organize the checking of quality indicators of all products (or all services provided)
- To propose in the established procedure to Certification Bodies to withdraw product certificates,
- To propose in the established procedure to the Lithuanian Standardization Department to deprive the enterprise (natural person) of the right to use a special mark of the manufactured products
- To stop product tests, if the procedure of testing established by the standards is not followed;
- To apply economic sanctions and other legal effect measures foreseen by normative acts against legal persons
- To impose administrative penalties on natural persons in the procedure prescribed by the laws.

In principle, SQI's activity is based on the *The Law on Product Safety of the Republic of Lithuania* (No. VIII-1206 of 1 June 1999). But this Law provides for only general requirements. More precise procedures, rules on how to implement this law, distribute responsibilities, and define fines for the infringements will have to be specified by other regulations, resolutions. An example: while in the EU a high fine can be imposed on the company if its product caused death to the user, in Lithuania this is properly regulated.

It is a question of further research, whether the legal basis of SQI is equally sufficient to defend the rights of companies as consumers, or SQI is rather an institution of consumer protection in the sense of the consumer as an individual citizen.

6.2.2 Resources

At present some 55 people are working for the State Quality Inspectorate responsible for non-food goods, of which 6 inspectors are responsible for the category electric products. There are plans for the development of the institution: for the category of non-food goods it is planned to employ 150 people. The present 6 inspectors in charge of electrical equipment are not enough for

- controlling the market
- and maintaining mutual help relations between SQI and the testing / certification bodies.

While the EU requires that Market Surveillance institutions of its Member States control annually 1% of the products in the market, in Lithuania this is impossible due to high costs and human resources needed for such a profound Market Surveillance system. An example: if SQI wants to test a product, it has to buy it - however, it is still not regulated, who would pay for this. True, there are laws and regulations in draft form, which state that if Market Surveillance takes the product from the market and after testing proves that it was not conform with safety requirements, then the guilty part will have to pay for this - otherwise if product proves to be compliant, then the state would cover testing and other related costs. However, the financial side of this procedure is still not settled.

Lithuanian consumers lack the necessary information about the products and their safety. The State Quality Inspectorate does not maintain a list of prohibited products and does not publish anything officially. The statistics maintained by SQI does not follow the number, the country of origin of the types inspected and SQI does not have a list of rejected products. Quarterly reports are produced but not published. Associations of consumers are very weak in Lithuania. Lack of information is aggravated by the fact that in general household incomes are low, and therefore consumers in Lithuania tend to buy cheaper products without being able to take into considerations safety aspects.

6.2.3 On the safety of non-food products, in particular of electrical equipment

The majority of electric equipment and apparatus are imported. At present in Lithuania there is a relatively small number of local electrical equipment producers. The protection of the market of electric equipment is necessary, because experience shows that many, even CE marked or TUV certified products are not safe. Marking, certification, country of origin and safety are independent attributes, thus for example an electric water boiler, manufactured in China may have CE mark and be unsafe.

SQI does not carry out testing. Control by SQI means that they check documents, whether the equipment is certified or not, whether it has all instructions in Lithuanian language, and proper marking. If not, then they record such fact as infringement, and impose fines. If the equipment is not certified or does not have proper documents it does not prove that it is unsafe physically.

SQI checks annually 25% of locally produced non-food products and 75% of imported non-food products. Of the total number of non-food products they have checked, they have found last year (1999) 43% infringements. In particular,

- the percentage of infringements among imported and checked non-food products was 52%
- the percentage of infringements among locally produced and checked non-food products was 27%

In the non-food product category the most dangerous products, from where the majority of the infringements were reported, are

- toys,
- chemical products
- and TV sets.

In the category of electric equipment the findings of Market Surveillance regarding compliance of safety rules illustrate the need for market protection well: during the control raids approximately one third (expressed in value terms) of electrical equipment were of poor quality or unsafe. However, it has to be taken into account that Market Surveillance institutions usually check stores and products where their suspicion is founded on previous record, complaints or their experience. International experience shows that even if there is a ratio of 30 % of defective products in conjunction with specific raids or targeted inspections, this proportion does not really reflect the risks associated with unsafe equipment. In reality, when all established marketing channels are taken into account, and this with regard to the number of types of products, of the products in the market less than 1 % are actually defect. (See Finnish experience chapter)

Electrical equipment as a sub-category are part of the non-food category. At present 6 inspectors are working for SQI in the sub-category of electric products. From the category of electrical equipment SQI encounters some 30% of infringements annually. This proportion is somewhat lower than in the general non-food category. The breakdown of infringements in the electrical equipment sub-category by main causes are as follows:

- In 6-8% of electrical equipment checked SQI encounters infringements which due to non compliance with quality requirements.
- In case of more than 20% of the electrical equipment checked SQI encounters infringements that are related to safety aspects. this can be subdivided as follows. Infringers on the ground of safety are those companies, whose products
 - do not have certificates,
 - have incorrect product marking applied on them,
 - have no properly prepared instructions for users,
 - etc.

The inspection of electrical equipment on the Lithuanian market has produced the following results in the first quarter of 2000.

- *Electrical equipment inspected.* There were 98 rounds of inspection, during which 1020 stocks of electrical equipment were inspected. (A stock of goods can mean the stock on the premises of a company or on the premises of a site of a company) These stocks of goods contained altogether 28.000 pieces of electric equipment, representing altogether a value of 1.7 Million Litass.
- *Electrical equipment rejected.* Out of the above mentioned set of 1020 stocks of electrical equipment 371 stocks were rejected due to quality or safety reasons. Out of the total inspected value of 1.7 Million Litass SQI rejected stocks representing the value of 593.000 Litass (35%).
- *Punishments.* Due to the above infringements 49 persons were fined and a fine of altogether 13.000 Litass was imposed. 16 persons were warned.

The following table gives an overview on the five years development of SQI's activities in the field of controlling electrical equipment on the market.

Table 23
Electric equipment inspected by State Quality Inspectorate

Year	Number of inspections		Value of products inspected, mln Lt		
	Total	Of this infringements found during inspections	Total	Out of the total: products imported	Out of the total: products of local origin
1995	491	342	8,65		
1996	515	438	8,68		
1997	297	248	5,61		
1998	310	257	7,01		
1999	514	242	7,42	6,78	0,64

Table 24
Detailed infringement statistics of State Quality Inspectorate
in the field of electric equipment

Year	Monetary value of products with infringements, mln Lt			Infringements (%)	Value of goods stopped, mln. Lt	Number of individuals fined	Value of fines, Lt
	Total	Out of the total: products from foreign countries / imported	Out of the total: products of local origin				
1995	2,63			30,40%	2,25	348	44 086
1996	3,12			35,94%	2,87	438	58 300
1997	2,33			41,53%	2,16	248	43 560
1998	3,10			44,22%	2,90	275	82 915
1999	2,67	2,46	0,2	35,98%	2,44	242	82 162

SQI's time series underline the facts that

- the proportion of non-compliant products among electrical equipment checked is over one-third
- between foreign and locally produced goods there is no difference regarding the ratio of infringements.

SQI receives annually more than 300 official complaints due to unsafe electric equipment.

6.2.4 Linkages

Certification / testing bodies. SQI does not carry out testing. When tests are needed, SQI co-operates with the certification / testing bodies. Certification bodies in Lithuania usually issue certificates of conformity for 3 years for a product of a company. However, there is a need to check whether conformity is maintained during this period. Therefore SQI checks such companies annually and if there are some suspicions, the certification / testing bodies perform tests on behalf of SQI. Although certification / testing bodies are profit oriented business entities, tests performed by them on behalf of SQI are free of charge for SQI. This system of so-called "mutual help" can be maintained because the control activity of SQI generates income for the certification / testing companies. However, it clearly needs to be regulated and financed.

Customs. The co-operation between SQI and the Customs Department is occasional. The Customs refuses to provide sufficient information for SQI about the results of checks of certification documentation of product inflows. However, there are cases of co-operation as well. An illuminating case in point is the defence of Lithuanian consumers from unsafe electric equipment declared as second hand products.

The regulation of obligatory certification makes an exception for second hand electric equipment. This hole in the scope of the regulation allows unfair traders to import unsafe products. Dishonest importers sometimes declare their production as second hand even if they are new. Thus they can freely supply products into Lithuanian market without having safety-assuring certificate. There were some cases when the Customs Department invited the SQI representatives to make an expertise of such products in order to prove that some certain equipment is second hand not new. It is very difficult to determine whether the equipment is new or not, e.g. importers often open the boxes and import the equipment and the boxes separately, declaring that the products are second hand.

The transposed LVD does not make such an exception and this will have a positive impact on general safety level of electric equipment imported.

Twin organizations in other countries. SQI co-operates with analogous Market Surveillance institutions in other countries. They interchange information about unsafe products, which were discovered in other countries. An example: SQI co-operates with the Hungarian General Inspectorate of Consumer Protection through the TRAPEX program and information is interchanged. This network of information exchange will have to be extended with the relevant EU bodies.

6.3 Lithuanian Custom's Department

Lithuanian Custom's Department in Lithuania is an institution under the Ministry of Finance. 3100 people are working at the Custom's in Lithuania. It includes Custom's Department, 10 local Customs' Offices in Lithuanian regions, Custom's Posts, Custom's School and Customs' Laboratory.

The main legal document providing for the main Custom's functions, responsibilities and procedures is the Custom's Law No. I-1292 passed by the Seimas in 1996 April 18 and enforced on the 1st of January 1998. This Law was prepared according to the EU Custom's related regulations and legal system. The law introduced the customs procedure. This procedure confirms that if for a batch of goods Custom's formalities are carried out properly and all duties were paid, no restrictions should be applied to the free circulation of these goods in Lithuania. The importing company can appeal no later than in 3 months against the decisions to the local Customs' office or to the Customs Department. If the decision after appealing to the customs' is not changed then the company can appeal to the Court.

Customs Posts are obliged to control certification documents of those goods which are submitted for import and which are under the scope of the obligatory certification regulation.

6.4 National Accreditation Bureau

6.4.1 Institutional arrangement

Lithuanian market surveillance institutions can be subdivided into groups by the objective of their control. The National Accreditation Bureau is one of the institutions which have the aim of controlling the procedures of "Safety of use and conformity assessment". Other institutions having this aim are the Metrology Inspection, the Metrology Service and the Standardization Department.

The Bureau's main tasks are

- to develop and improve the accreditation system,
- to participate within its competence in the conformity assessment activities.

Its functions are

- To accredit certification offices of products and services, quality systems and employees (further certification offices), testing and calibration laboratories as well as control institutions, to issue accreditation certificates and provide information thereof;
- To supervise the activities of accredited certification and control institutions as well as testing and calibration laboratories;
- To cancel accreditation certificates or to suspend their validity in the procedure established by the documents of the conformity assessment system, if the accredited certification and control office or testing and calibration laboratory does not follow the established accreditation requirements and does not eliminate the indicated shortcomings;
- To evaluate the testing laboratories, certification and control institutions, proposed to be announced (to notify) responsible for conformity assessment;
- To strive that accreditation results and the activities of accredited certification and control institutions as well as testing and calibration laboratories would be recognized at international level;
- To organize the preparation of quality inspection of the activities of accredited testing and calibration laboratories and their performance;
- To participate in harmonizing legal acts of the Republic of Lithuania with the European Union legislation and their implementation within the competence of the National Accreditation Office.

The Bureau has the right to receive statistical data, documents, information on conformity assessment works performed and other information from the Government of the Republic of Lithuania and local self-government enterprises, offices and organizations.

The National Accreditation Bureau is a Government institution under the Ministry of Public Administration Reforms and Local Authorities. Its legal basis is the Regulation approved on 1999.05.21 by Order No. 42 of the Ministry of Public Administration Reforms and Local Authorities. Originally it was established 1 January 1998 within the organisational structure of the Lithuanian Standards Board, but now legally it is independent from the Lithuanian Standards Board.

At present 8 people are working in the Bureau and occasionally 70 external experts are involved in the work. It is financed from State budget and not budgetary funds. The yearly budget is approximately 300.000 Lt. and the Bureau generates some income by charging fees for accreditations.

The National Accreditation Bureau is supervised by the *Accreditation Council*, which is composed of 15 representatives from the

- governmental institutions,
- associations of consumers,
- manufacturers, businessmen,
- testing laboratories and certification bodies
- academia,
- market surveillance and inspection bodies,
- State Metrology Service.

The Statute of the Accreditation Council is approved by the Minister of Public Administration Reforms and Local Authorities. The role of Accreditation Council consists in the creation of confidence among all parties concerned. The Accreditation Council among other tasks

- participates in the development of policies and principles regarding the content and functioning of the accreditation system,
- creates the Appeals Commission for setting complains and appeals against the activities of National Accreditation Bureau.

An *Appeals Commission* is set up by Accreditation Council. The Commission investigates appeals and complaints against the activities of the Bureau. The Statute of the Appeals Commission is approved by the Minister of Public Administration Reforms and Local Authorities.

Sectoral Accreditation Committees have been established with advisory roles in the following fields:

- construction materials and products;
- metrology;
- mechanical, electrical engineering and information technology;
- chemical analysis;
- microbiological analysis.

The activities of these Committees are aimed at technical activities, participating in defining of special accreditation requirements within their scope, advising the Accreditation Bureau in the selection of assessors, etc.

6.4.2 Accreditation activities

For its own activities the Bureau applies standards, which provide for the requirements for accreditation bodies, such as 45001; 450010; 17010.

The normative basis of accreditation is as follows. Accreditation activity in Lithuania is based on:

- EN 45000 series standards adopted as the standards of the Republic of Lithuania;
- ISO/IEC Guides;
- EA (European co-operation for Accreditation) application documents;
- Corresponding Lithuanian guidance documents on accreditation.

Currently, there are accredited

- 31 testing laboratories,
- 17 calibration laboratories and
- 5 product certification bodies.

Accreditation price is 5.000 – 15.000 Lt depending on the area of accreditation, 2.000 Lt is yearly recurring costs for certification.

A limited number of testing laboratories and product certification bodies were accredited by both the National Accreditation Bureau and German accreditation bodies such as DAP and DaTech.

The Bureau accredits quality systems and personnel as well. At present 70 enterprises in Lithuania have certified their quality assurance systems with Western certification bodies (such as TUV Cert., Bureau Veritas and others).

6.4.3 International co-operation

Among the tasks of the National Accreditation Bureau is

- to seek the international recognition of the activities of accredited Lithuanian organizations (test reports, certificates of conformity)
- and to enable Lithuania to become the country - signature of EA Multilateral Agreements.

The Bureau seeks it through co-operation with the European Co-operation for Accreditation (EA). The National Accreditation Bureau was accepted as a member of EA during the 3rd EA General Assembly at 1-3 June 1999 in Venice (from June 1998 LA was an associate member of EA).

In the frame of the various projects the Bureau co-operates with national Accreditation Bodies of countries such as Germany, Sweden, Netherlands, Norway, also of Latvia, Estonia, Poland, Slovakia and Bulgaria in the frame of the relevant Agreements on co-operation.

6.4.4 EU-related development of the accreditation system

The Lithuanian accreditation system will have to be transformed to the EU type accreditation system, which will be in force when PECA (European Protocol on Conformity Assessment) is signed between Lithuania and the EU. However, this process may take still several years.

Only after Lithuania will be a member of PECA, will this Bureau have the right to accredit Lithuanian certification houses in order to certify products on the conformity to the requirements of sectoral EU directives, among them the LVD. Thus signing PECA is a pre-requisit of certifying Lithuanian products to be LVD-conform.

EU-type accreditation activity will be an essential part of the work of the Bureau. The Head of the Bureau does not see the need for any restructuring of this institution which would be attributable to the introduction of vertical directives. Thus the introduction of the LVD will not have a profound impact on the National Accreditation Bureau. Nor does this development generate the need for additional financing of this institution.

6.5 Lithuanian Standardization Board

6.5.1 Institutional arrangement

The control objects of the Board are safety of use and conformity assessment.

Lithuanian Standards Board was established on the 25th of April 1990 is an institution of the executive power of the Republic of Lithuania, within its province taking part in establishing and implementing the policy of the Government of the Republic of Lithuania within standardization, quality assurance fields and carrying out other functions provided by the Laws of the Republic of Lithuania and Government Resolutions.

Between 1990 and 1995 the name of the institution was Standardisation Service. In 1995 the institution was reorganised into Standards Board (SB) under the Ministry of Public Administration Reforms and Local Authorities by a Resolution of this Ministry. (1994.10.11 Resolution No. 966 of the Government of the Republic of Lithuania.) Its status was modified by the Regulation approved on 1997.12.30 by Order No. 105 of the Ministry of Public Administration Reforms and Local Authorities. The above resolutions also provided for functions and objectives of the institution. SB has a legal person's status (i.e. it has its own stamp with State Emblem with its own name). SB is financed by State budget and not budgetary funds under supervision of the mentioned Ministry. The Ministry performs functions of the Lithuanian SB's founder.

SB establishes and develops Lithuanian standardization system, approves Lithuanian Standards (1421 standards approved by Jan 1-st, 1998) and other normative documents related to its activities, sets up technical committees, participates in implementation of European Union directives and harmonization of legal acts of the Republic of Lithuania.

The Board's main tasks are

- to participate in forming and implementing the policy of the Government of the Republic of Lithuania in the sphere of standardization;
- to develop and improve the Lithuanian standardization system

The functions of the Board are the following:

- To co-ordinate the standardization activities in all branches of economy, to methodically guide it and organize the preparation of legal acts and standard documents in this sphere;
- To approve Lithuanian standards and other standard documents;
- To participate in implementing the European Union directives and co-ordinating the legal acts of the Republic of Lithuania with the European Union directives within the competence of the Standardization Board;
- To develop and improve the standardization information system, provide information in the established procedure about standards, technical regulations and conformity assessment procedures according to the European Union Directive 83/189/EEC and the procedures of the Inquiry Centre of the World Trade Organization;
- To participate in organizing the creation of quality and environmental management systems (standard documents, qualification of specialists, consulting).

The rights of the Board are as follows:

- To publish and circulate Lithuanian standards (exclusive right);
- To prepare and approve within its competence documents that are obligatory to be implemented by other institutions of the Government of the Republic of Lithuania and economic entities, upon their co-ordination in the established procedure.

The work programme of Lithuanian Standards Board is carried out by the following Divisions: Methodological Division, Quality Management Division, Information Centre, International Relation Division, Sales and Distribution Division, Library. A Standardization Council assists Lithuanian Standards Board in solving and co-ordinating strategic matters of its activities. Technical committees (45 technical committees registered by Jan 1-st, 1998), are involved in drafting Lithuanian standards, assist in the implementation of the Standardization Work Programme.

On the 11th of April 2000 a Standardization Law was adopted. This Law deals with national standardisation objectives, principles, provides for the rules of preparing and adopting Lithuanian standards and other general issues.

6.5.2 Activities in relation to LVD

The application of standards for manufacturers is not obligatory in Lithuania. Today in most of the cases manufacturers have the option of choosing between Soviet-type (GOST) standards and EU-type standards. However, Lithuanian standards are in the process of gradually being changed by the introduction of EU-type standards.

The harmonisation of standards is a continuous process in the EU. The European Union has announced 796 harmonised standards related to LVD, including those which are under preparation. Up to now 438 standards related to LVD are already adopted in the EU.

Translation and adoption of these standards is the task of the Lithuanian Standardisation Board.. Out of the standards adopted in the EU up to 31 March 2000

- · 199 standards are already adopted in Lithuania and
- · 209 standards are planned to be adopted during the year 2000 in Lithuania.

The main costs related to legal harmonization is the translation of these standards. Until now translation was financed by the PHARE Program, the translation and adoption of new standards will have to be financed later by Lithuania.

6.6 Third Parties - Certification Houses

There are 3 certification bodies in the category of electrical equipment in Lithuania, all of them having the legal status of a company. Their designation is done by the Ministry of Economy. Designation means that these institutions are identified in the regulation concerning the compulsory certification of household, computer, cash register and radio electric equipment.

The National Accreditation Bureau has the right to propose the designation and following the signing of an agreement with the EU, it will have the right to notification, i.e. to accredit these bodies according to the requirements of LVD or other Directives.

6.6.1 Ltd. "EGSC" Certification Centre of Electric Equipment

Legal and institutional arrangement. The centre was formed on the basis of a Soviet testing centre. Today it is a joint stock company with 20 percent state ownership. At present it employs 27 people. It is accredited by the National Accreditation Bureau to perform activities according to the standards LST EN 45001 and LST EN 45011.

By the time the agreement relating to the accreditation of certification bodies between Lithuania and the EU will be signed, the Centre plans to apply for becoming Notified Body in order to be able to issue certifications for LVD. For the time being this is not possible for any testing house in Lithuania. Practically this will involve the extension of the present accreditation area to test electric tools, equipment, cables and other electric appliances according to the LVD Directive 72/23/EEC.

For testing and certifying products, EGSC applies GOST and EU-type standards, gradually shifting to the EU standards. The centre has mutual recognition and co-operation agreements with other testing laboratories in other countries such as Finco, Semco, TUV Thuringen and others in Poland, Czech Republic. EGSC has a status of official observer in the CENELEC.

Activities. Obligatory certification activity provides the most important business line of the Centre.

- If EGSC physically tests a prototype, a medium price for testing + certifying the product is estimated to be 2000 Litas.
- If the product has already been certified by another certification body recognised by EGSC, the Centre may issue its certification without physically testing the equipment. The cost of this document-based activity is a few hundred Litas.

For industrial or capital goods to be put on the local market Lithuanian certification is not obligatory. If there is a doubt on the sole, exclusive industrial use of a product, EGSC does not test physically the product, but issues a document which proves that the particular type is to be used solely in industrial environment, not in households. A medium price for such a document is 100 Litas.

A typical certification document issued by EGSC covers usually more than just one type of product. A certification document is product-specific but not company-specific. This means that if a certain type is certified on behalf of a producer or importer company, the document is valid if used by or sold to other companies (other importers, producers, and distributors) than the original client of the certification house.

Another business line of EGSC is to install and renovate laboratory facilities of Lithuanian manufacturers of electric equipment.

The safety of electric equipment. Most of the products submitted to EGSC are household goods e.g. refrigerators, washing machines, electric household repair tools, installations equipment, kitchen apparatus etc.

Most of the clients requesting certification of their products are foreign companies or local companies importing foreign electric goods. The amount of electric equipment produced in Lithuania is constantly diminishing. Between 1994 and 1999 the proportion of locally produced electric equipment submitted to the Centre has decreased from 60% to 4%. Parallel with this process the number of types of imported electric equipment has increased.

In 1999 the Centre has received requests for certifying altogether 35.026 types of products.

- It issued certifications which were valid for altogether 21.386 types of electric equipment.
 - The rest, 13.640 types of products, (making up 39% of the total requested amount of types) were requested but have been rejected for various reasons:
 - they do not comply with the requirements,
 - have not provided necessary documents, some of the even have provided falsified documents, etc.
- Those products which do not conform to the requirements come very often from former socialist countries.

To conclude: more than one third of the submitted products is rejected due to non-compliance or formal (document-related) problems.

Expected impacts of introducing LVD. EGSC will face very difficult times if the system of obligatory certification will be removed, because it will lose many clients. Experience in other countries prove that testing official testing laboratories analogous to the EGSC had to reduce the number of employees and the activities have shrunk after the LVD was introduced. However, the Centre hopes that in the future a system of mutual agreement between the Centre and the Market Surveillance will be established and thus the Centre hopes to have some functions to perform, charged by the future Market Surveillance institutions.

According to the Centre's opinion obligatory certification is a very important defence line of market protection in Lithuania. The centre fears that after the LVD is introduced - under which the manufacturer or importer itself will have the right to attach CE mark on their products themselves - a very important protection line against unsafe equipment will be abolished. Today many importer requesting the import of unsafe products cannot enter the Lithuanian market, and this is to a great extent due to the present obligatory certification system of household, computer, cash register and radio electric goods.

If the obligatory certification system will be removed, there remains only one defence line against unsafe products: the official Market Surveillance system. However, according to the Center's opinion at present the Market Surveillance system (embodied mainly by the State Quality Inspectorate) is not strong enough. There is a serious risk that in the time period of the development of the Market Surveillance system many unsafe and dangerous products will be put on the Lithuanian market and reach the consumers.

According to the opinion of the Centre, in case of the safety of electrical equipment it is possible to compare GOST standards and harmonized EU standards.

- *As of safety requirements:* the safety requirements expressed by GOST standards are similar to those of the harmonised European standards. Therefore manufacturers whose products are safe under GOST standards will not have to change the construction or the design of electric equipment in order to comply with the safety requirements covered by the LVD. Therefore such manufacturers will not have big problems attributable to the introduction of the LVD in 2001 and they will be able to attach the CE mark on their products.
- *As of necessary testing:* However, there is a field where additional activity is to be expected: more testing will have to be performed in order to comply with the EU requirements, because the harmonised European standards require much more testing to be performed in order to prove the safety of the equipment. In this respect GOST standards were less demanding. The costs due to this might arise while buying new testing equipment for companies or testing bodies.

It is to be expected that smaller producing companies will have bigger problems when complying with the safety-related rules. According to the estimates of the centre there might be some 100 small companies producing electric equipment. Such enterprises usually produce low technology goods, such as lamps, simple installation devices and etc. These companies are usually making assembly work from cheap components. It is common knowledge that such companies perform routine tests very seldom, and they often lack knowledge about

- safety
- standards
- how to comply with the safety-related requirements provided in the LVD
- and what would be the procedure of compliance.

The introduction of LVD will probably increase the import from the EU.

6.6.2 Certification Body of State Enterprise „Infostruktura”

Institutional arrangement. SE „Infostruktura” is an IT consultant and Internet provider company. Its main clients are Government bodies. Infostruktura is state owned, subordinated to the Ministry of Public Administration Reforms and Local Governments, but it is not financed from the budget. The Certification Body is a division of State Enterprise Infostruktura. The Body was established by Order No. 164 of 9 December 1997 issued by the Ministry of Communications and Informatics as a consequence of Infostruktura having won a tender on this function. In 1999 the Lithuanian Accreditation Bureau accredited the Certification Body according to LST EN 14011 standard to certify IT and other electronic and electrotechnical equipment. The Certification Body is part of the certification system, that together with five testing laboratories in Lithuania accomplishes certification procedures for computer technology products and cash registers.

Activities. The Certification Body employs 4 people performing solely certification for computers, cash apparatus and other IT equipment which fall under the obligatory certification system in Lithuania. Object of control: compliance with safety and EMC requirements and compliance with requirements regarding adaptation to Lithuanian signs and language.

The enterprise applies European standards such as EN 60950, EN 55022 (CISPR22), EN 50082-1, EN 50082-2, EN 55024 (CISPR 24) for equipment's which fall under the EMC and the LVD. Additionally applies TCO'92, TCO'95, and TCO '99 norms for monitors. They expect to become a Notified Body to do certifications in the field of EU Directives 72/23/EEC and 89/3336/EEC, 98/37/EEC, applying EU harmonised standards for testing computers and cash registers

The Certification Body yearly issues 400 certificates. The Certification Body does not perform tests, it performs only documentation control. Certification costs depend on the object and on the range of requirements but on average is 900 Lt., this price does not include the price of the tests. This price is 7-10 times less than the respective price in Western Europe. The Certification Body contracts out testing of the above mentioned equipment to laboratories such as „Ratesta”, „Valstybine radio datniu tarnyba”, NEMKO, SEMKO, FIMKO, TÜV Rheinland Hungaria Kft., Korea Testing Laboratory and others.

The majority of products tested is imported. The Certification Body does not encounter products which come from Russia and other Eastern European countries since the majority of IT are imported from the West. Lithuanian companies perform assembling activities of computers or cash apparatus but no company performs complete manufacturing. 30% of equipment submitted for certification are rejected as non-compliant. The majority of rejections involve Lithuanian assemblers and in only a small number of cases involve importers from the EU.

Expected impacts. If the obligatory system of certification will be abolished, this company will lose many clients. Infostruktura expects that if the obligatory system of certification will be abolished, many low quality, unsafe products will reach the Lithuanian market. Therefore there will be a need for more profound Market Surveillance system. They do not expect the increase of import which would be attributable to the introduction of LVD.

They are aware that experience in EU countries has shown that the majority of electric equipment on the market do not comply with the safety requirements. Therefore they expect that even the EU countries will be concerned about the self-certification model and its functionality. and as a consequence a possible abolishment of module A (self-certification) in the EU.

In case of companies based on obsolete technologies, due to (1) new testing requirements and due to (2) new safety requirements the cost of production of electrical equipment might increase on average by 5%. Apart from changes in administrative procedures and the price of certification this is the increase which is attributable to the introduction of LVD.

The certification department of the SE „Infostruktura” is already using European standards so in this respect there will be no changes for them.

6.6.3Ltd. „Sertika” Certification Centre for Electric Equipment

Institutional arrangement. Sertika is a company majority owned by its employees, employing 7 people. It is designated to certify electric equipment, medical equipment, audio apparatus, telecommunications equipment. An extension of the accreditation area of Sertika will be needed in the future to test electric appliances and medical equipment safety according to the LVD Directive 72/23/EEC and according to the Medical Devices Directive. The company has bilateral agreements with other certification / testing laboratories in other countries such as Nemco, Semco, Demco, Finco, KTL (Korea), Byelorussia, Russia.

Activity. Sertika usually recognises certificates issued by other bodies - but not always. If indicated, Sertika performs physical testing even in case of those products

- which have certificates issued by laboratories with whom they have agreements
- and which have CE mark.

Per year „Sertika” issues 500 certificates. The overwhelming majority of certificates is issued for products imported from developed countries and from Far Eastern countries. Out of the total, only 5% of the certificates are issued for Lithuanian companies, and 1% for the companies from the former USSR. One certification document on average usually encompasses 3-5 types of products.

Certification costs in Germany are 2 000 – 6 000 DM (4 000 – 12 000 Lt), while in „Sertika” it costs 4 times less 500 – 1.500 Lt. Safety tests are expensive. An example: the high costs of keeping an equipment freezing environment and monitoring it with a camera costs 20 Lt/hour.

Safety of electrical equipment. On the whole 10% of the total amount of products submitted is rejected due to non-compliance. In case of the EU firms such as Sharp or Philips the rejection rate is lower: here 1% of the products is rejected due to non-compliance.

Experience shows that no document or marking guarantees the safety of the product completely. An example: the inflammability of TV sets, due to poor quality material of their plastic boxes, can be high even if the product was accompanied by the best documents or marks. In Lithuania at least 4 fires were caused by inflammable TV sets in three years. Generally in the category of telecommunication or audio equipment the difference between safe and unsafe products might be due to

- low quality of protective plastics,
- not isolated antennae
- and even due to one unsafe component.

Even famous European firms with world wide known brand names do not always comply with safety requirements.

Different testing laboratories interpret safety requirements provided in the standards differently. For this reason 'Sertika' found it difficult to sign an agreement with TUV, since not in all cases the interpretation of safety requirements are the same.

Expected impacts of the measure. The responsibility of the manufacturer will increase. Infringements will have to be fined by a considerable amount of money. Manufacturers will have to select all construction and raw material more accurately, considering their safety, and this will increase costs. Suppliers of manufacturers will have to be changed into new ones, which have EU-type certificates.

Concerning non-household goods it could be noted that such equipment is usually used by professionals, therefore the risk due to unsafe usage is lower. However, LVD does not make an exception with this category of products. It is to be expected that producers of non-household goods will have more additional costs than producers of household goods.

Costs to manufacturers will depend on the level and obsolescence of their technology. Many Lithuanian manufacturers of electric products, big and small companies, will have to invest in new technologies, processes, materials and know-how. Due to this reason the cost of producing electric equipment might rise by 5% in case of obsolete technologies, but the price will be determined by the market.

The number of smaller companies producing electrical equipment under LVD is approximately 100. Of these only 20% is to be expected to produce in compliance with safety requirements as expressed in LVD.

7. Appendix: Impacts of analogous regulations in other countries

7.1 Impact Assessment of a proposed General Product Safety Directive in the EU

In 1989 the Commission of the European Communities has presented a regulatory impact assessment related to a "Proposal for a Council Directive relating to the approximation of the laws, regulations and administrative provisions of the Member States concerning general product safety.". (Source: Improving the Quality of Legislation for Business - The European Commission's Business Impact Assessment System. Document quoted: COM(89) 162 final – SYN 192 Brussels, 7 June 1989).

The text below contains the essence of the original document. It is to be noted that the generally worded original document contains

- neither any quantitative description of the businesses under the impact of the Proposal (such as number, turnover, etc)
- nor a quantitative estimation of the impacts (by estimating additional work to be done or in monetary terms)

The main findings of the document are as follows.

Impact statement on the European citizen

The proposition of this Directive will

- substantially improve the level of product safety in the Community and
- contribute to the far greater movement of goods and assist in the expansion of such interstate trade by avoiding the creation of barriers to trade which arise from differences of interpretation and assessment of safety and health risks
- facilitate provision of information and intervention on product safety

Goods coming into the Community from third countries will have to comply with the provisions of the proposed Directive, and so will not be able to gain a price advantage from having safety standards below those required of European Community manufacturers.

The Directive will accomplish the objectives by

- defining requirements for products on the health and safety of consumers
- requiring Member States to have a proper infrastructure on a national basis to discharge their responsibility to ensure compliance by producers with the above requirements
- requiring Member States to take common measures in respect of risks
- requiring Member States to gather information regarding product safety, with special respect to grave and immediate risks and to disseminate it internally and through the Commission to each other
- establishing a procedure for action at Community level in cases of products involving an immediate and grave risk to the health and safety of a number of persons in more than one Member State
- ensuring a co-ordinated response with the Member States by
- either taking the same measures
- or where it is established there is no risk, not to take any measures or to withdraw those already taken in isolation.
- establishing a Committee on Product Safety Emergencies composed of representatives of the Member States
- requiring producers to be informed of the means of appeal to encourage transparency and fairness of application of health and safety measures.

In particular, Member States

- will have to extend their product safety control procedures and the competent authorities who execute them to embrace such products within the scope of, the proposed Directive which are not at present subject to such controls.

- will be obliged to collect information and take interventionist measures as and when required by the Commission in cases of grave and immediate risk to health and safety which are not purely local.
- would also have to participate in the Management Committee (the Committee on Product Safety Emergencies) set up to consider proposals for measures made by the Commission in cases of grave and immediate risk to health or safety.

The main reasons for introducing the measure, the essential policy objectives

Reasons and objectives:

- To protect the European citizen against injury or damage resulting from unsafe products, especially where such products are not at present regulated. To promote a uniform high level of safety in the Community. To help to raise the standard of living throughout the Community in accordance with Article 2 of the Treaty and ensure the high level of safety required by Article 100 A added by the Single Act.
- To reinforce the principle of free movement for products complying with Community or national health and safety requirements
- To enable the Commission to control the uniform and non-discriminatory application of product safety criteria throughout the Community.
- To facilitate the completion of the Internal Market for products, by removing barriers to trade arising from products being permitted in Certain Member States whilst being banned in others, and to strengthen the confidence of citizens in products originating from, or coming from, another Member State.

The potential consequences of non-intervention

The consequences of non-intervention by the EC would be continued inconsistency of response by Member States, to cases of products which present an actual or potential grave and immediate risk to the health and safety of citizens in more than one Member State and an unacceptable delay in the taking of adequate uniform measures throughout the Community.

Action needs to be taken at EC level also because safety criteria in Member States are widely different in respect of individual products or do not, in respect of some products, exist at all, and also because of the diversity of measures that may be taken to meet the problem of unsafe products.

The consequences of non-intervention by the EC would be continued or increased division of the market and risk of injury and damage to the European citizen from unsafe products, thus failing to provide the full advantages to be expected from the completion of the Internal Market. These disparities will not be removed unless the EC approximates the underlying laws.

If the Proposal were not to go ahead, some businesses would continue to profit by cutting costs on safety to the detriment of the health and safety of Europe's citizens, thus unfairly distorting competition. If the proposal were not to go ahead, some suppliers both inside and outside the Community, would continue to reap a price advantage from low safety standards.

Features of the business in question. The proposal has implications for all manufacturing and processing industries, some businesses providing services to these industries and to retailers, and to wholesalers and retailers themselves. Thus businesses of all types and sizes are involved, SMEs forming a large part of the market.

What obligation does this measure impose on business?

The measures impose a requirement for products not to present an unacceptable risk for the safety and health of users/consumers. The obligation includes an obligation to permanently monitor the safety of the goods.

As the procedures involved in complying with the measures put forward in the Proposal can be adapted into their existing procedures, business should not be involved in substantial additional cost.

Responsible suppliers of all sizes already only produce and market goods they believe to be safe. No substantial procedural requirements of an administrative nature are made for them, except in relation to the need to monitor the safety of products after sale, which can be accomplished in a number of relatively simple and inexpensive ways, which can be incorporated into their existing manufacturing/marketing/after sales systems.

There are no special financial consequences for business, although the measures will encourage such businesses to keep proper records and data, where are not already required by other Community or national measures, for example under the requirements of vertical directives. Management time would be taken up in complying with the information requests, but if proper data is kept by businesses this should not be great and in any event would only occur if there has been sufficient evidence of an actual or potential risk to health and safety.

Once it is established or there is a strong reason to believe that a particular product does not comply with the general safety requirement or that despite such compliance it may be unsafe, Member States shall have powers of requesting information, taking samples, seizing or sequestrating products, and requesting the publication of warnings by the persons concerned. They may also request changes in a product or ban manufacture/marketing. The proposals will only stop producers from producing unsafe goods.

Most Member States already control the safety of products – although the scope and methods vary – unless already harmonized for particular sectors or products by Community level legislation.

Does the proposal contain measures to take account of the specific situation of Small and Medium Sized Enterprises? There are no special provisions in respect of SMEs and it is not desirable, given the aim and nature of the proposals, that they should be exempted. The measures proposed apply to all businesses irrespective of size, but the retail sector, where the percentage of SMEs is particularly high, are only expected to comply in respect of any activity exercised by them and which may affect the safety properties of a product. Insofar as the measure could stimulate increased demand for the products of SMEs, they will be stimulated by this Proposal.

Benefits to businesses

The measures should considerably encourage purchases from SMEs and consequently their creation due to the fact that the European citizen will have increased faith in the safety of a product, irrespective of the Member State in which the product was first marketed within the EC and irrespective of the size of the supplier. By promoting safety standards and encouraging confidence in the products, sales should increase for businesses of all sizes and inter-Member State trade will be promoted, with a resulting increase in competition. The measures will also promote greater equality in the efforts made by firms to ensure safety, whereas previously firms who reduced safety standards may have had a cost-advantage.

Costs to businesses. Although the measures will represent a higher unit cost the fewer the products involved, this cost should be minimal as the measures proposed can in large measure be integrated into the normal manufacturing, marketing and after sales methods of producers. Companies which had previously had an unfair price advantage due to the adoption of low safety level for their products, will be obliged to adopt at least the safety level required by the general safety requirement. A small extra cost for business might result from the measures envisaged, most especially in connection with the permanent monitoring of the product, but also in the provision of information to the competent authorities where required by them. There will also be a cost involved in complying with the requirements of Member States connected with the remedying of the risk to the safety and health of persons presented by the product. Apart from the Member States themselves, testing laboratories and certification bodies would be involved in implementing the controls foreseen by the proposed directive.

The likely effect on employment. The measures will create new jobs in manufacturing and marketing business, especially in the field of test and quality control, where these factors are currently insufficiently covered by the supplier concerned. The measures will also create new jobs with government inspection services and with testing laboratories and certification bodies. If the proposal did not go ahead these jobs would not be created.

Consultation of the representative organisations. Consultation with expert from the national administration of Member States, as well as with leading academics in the field of product safety from different Member States and also with members of national safety bodies concerned with the safety of products, have been systematically undertaken. By such consultations both employers and labour organisations have contributed to the concept of the Proposed Directive.

7.2 The transposition of LVD into Hungarian law and its impacts

7.2.1 The regulation

LVD was transposed to Hungarian law in 1997 by Decree No. 79/1997 IKIM of the Hungarian Ministry of Industry, Trade and Tourism. This was done as the adaptation of one of the twenty New Approach Directives, most which have been adopted into Hungarian law. There was no transitional period given: the new regulation came into force 90 days after announcement, in 1998. Its

- scope,
 - safety requirements
 - and conformity procedures
- are identical with those of the Directive.

In case of certain products certification is still compulsory, i.e. self-assessment is not possible. However, the range of these products is identical with those exempted from the scope of LVD in the Annex 2 of LVD (such as products to be used in explosive atmosphere, medical devices, etc.)

Relating to all products under the scope of LVD other relevant EU Directives, guidelines also have to be applied, or in lack of a European Directive the existing Hungarian laws have to be taken into consideration.

Prior to this regulation the compulsory safety approval of all electrical products was prescribed by law, in particular all electrical equipment, apparatus, appliances, components and accessories were allowed to be imported to and marketed in Hungary after having been checked and approved for safety to life, health, property and conformity with electrical safety standards.

7.2.2 Enforcing institutions

Public authority. The responsible government body of market surveillance is called Consumer Protection Inspectorate (FVF). This body has the task of controlling the goods that have been put on the market and check for CE marking, the declaration of conformity, and the technical documentation. The existence of these marks and documents are only a necessary, but not sufficient condition of the product being accepted. It is at the discretion of the Hungarian market surveillance authorities, whether they accept or reject the results of foreign assessments.

Third Party. For decades the obligatory approval and certification was the task of a designated certification body, the Hungarian Institute for Testing and Certification of Electrical Equipment (MEEI). It is an old institute which has begun the independent assessments in this field in 1932. Prior to the regulation MEEI had a monopoly status on the certification market. However, nowadays more laboratories provides the necessary services with varying quality and reliability. As a result, MEEI has changed from a monopolist into a market leader laboratory.

Generally MEEI carries out

- safety approval tests,
- product follow-up checking
- and factory inspections.

In relation to EU type conformity assessment MEEI offers its services in the following fields:

- research of relevant EU harmonized standards
- finding out which decrees, laws relate to the equipment
- assessment of conformity to relevant standards

- preparation of technical documentation
- manufacturer's declaration of conformity
- product control.
- production control.

Since 1997 the criteria to designate bodies for conformity assessment, certification and control have changed. Recently they are laid down in the Regulation 182/1997 of the Government, issued on 17. Oct.1997. In Hungary such bodies should be indicated by the Ministry of Economic Affairs. The criteria for being designated are as follows:

- professional knowledge, competency and ability;
- knowledge of relevant rules, regulations, laws, directives;
- experience in assessment;
- liability insurance.

MEEI has been re-designated by the new regulation as well. In the field of electrical equipment MEEI is the only body which was designated for performing all the three functions (conformity assessment, certification and control). However, for individual functions other laboratories have been designated as well.

As of Spring 2000, in lack of international agreements, no Hungarian certification body can have the status of a Notified Body. A Co-operation Agreement about the mutual acceptance of conformity assessments by Hungarian and EU bodies is under preparation. Until then the Declarations of Conformity issued by a Hungarian Certification Body are not accepted by the EU Notified Bodies. However, Hungarian Certification Bodies can assist to manufacturing companies in compiling their Declarations of Conformity.

7.2.3 Impacts on companies

The legal harmonization process detailed above has significantly changed the Hungarian assessing and certification market. The new rule created new tasks, responsibilities for the actors of the market, for producers, importers, distributors, and last but not least for the conformity assessment bodies. The execution of the new, more difficult, more complex conformity assessment procedures, their documentation is a serious and costly task especially for small- and medium sized enterprises. Many of these companies feel that

- although the regulation serves the interests of the producers and distributors by facilitating the launch of their products into national or foreign markets,
- however, the costs due to additional activities generated are high.

The new regulation caused surplus burden and costs for companies, in particular for SMEs

- to prepare the technical documentation by themselves or contracting it out to a certification company
- to store and to manage the technical documentation
- to follow the change of laws and regulations
- to change the production routine or the product if the safety requirements make it necessary
- to control the suppliers on the fulfilment of safety requirements

The surplus costs may increase the price of the products, but nobody has estimated by how much. There has been no impact study made on this topic. The regulation has contributed to the adjustment of Hungarian companies to the requirements of world markets and thus to export expansion, but there is no estimation on by how much.

Recently a survey has been conducted among Hungarian companies contracting out conformity assessment services to laboratories. According to the findings the customer companies make their decision according to the following checklist

- The costs of testing and declaration.
- The range of assessments undertaken. If the laboratory executes only the assessment of the final product, where to control the conformity of the components?

- The quality and acceptance of the laboratory. Will the certification be accepted by a wide range of buyers and authorities?
- Who goes to whom? Can all testing be done at the premises of the client company or has the client company to deliver the devices to the laboratory?
- The amount of the liability insurance.
- The staff delivering the assessment procedure.
- Contract aspects (fees, length of time, responsibility etc.)
- Rating by other client companies.

7.2.4 Impacts on consumers

The demand of Hungarian consumers on electrical goods

- is very *elastic* regarding the price, with other words: consumers very much prefer cheap goods to expensive goods.
- is very *inelastic* regarding product conformity, with other words: consumers are not well enough informed and not demanding enough to prefer goods satisfying all safety requirements to goods which satisfy only some of the safety requirements.

For the above reasons demand on cheap Eastern European products continues to be high. Risks to consumers due to unsafe products are typically underestimated by manufacturers and traders, and overestimated by certification bodies. Certification bodies claim that many unsafe products reach the market because companies lack the necessary testing equipment and tools and that tests are often being conducted half-heartedly and cheaply. Consequently self-administered conformity assessment procedure is performed only up to a certain extent. This is not a unique, Hungarian specific situation, because Danish, Swedish, and Finnish, market surveillance bodies have the similar experiences.

The risk is high, but it is impossible to learn, whether the risk has grown since 1998, and if yes, whether it occurred due to the new regulation. The proportion of defect goods is always given in relation to controlled goods, and a control occurs only if there is a basis for suspicion. However, there is ample data which shows that adjustment to the new regulation is very slow.

Consumer Protection Inspectorate (FVF) has its own laboratories and regularly performs control raids. Its recent findings were as follows:

- *Administrative deficiencies.* During these raids a great number of products are found without CE mark or with CE mark but without the documentation proving its validity. For instance, when controlling computers and their peripheries, more than 60% of the equipment either didn't have the CE marking or lacked the necessary documents.
- *Safety deficiencies.* In 1999 FVF controlled household electric machines and Christmas tree electric lights in 176 stores, based on the 79/1997 IKIM regulation (which is the transposed LVD). The result was that 42 out of the controlled 65 types were found dangerous: capable of causing electric strike or fire. Most of these products were imported from Asian or unidentifiable countries. True, 42 is less than 1% of the total number of types of household electric machines.

Most of the forbidden electrical equipment are from the following group:

- toaster
- hand mixer with stand and bowl
- coffee-percolators
- electric toaster ovens
- cordless electric filter jug
- PVC pressure – sensitive adhesive tape for electrical cables
- Irons

This appalling proportion of defect goods is on the rise and is typical beyond electric equipment for the whole range of technical goods. A service of FVF, called TRAPEX INFO informs the consumers and importers about the appearance of hazardous products.

7.3 The Electromagnetic Compatibility Directive in Hungary

7.3.1 The EMC Directive

An equipment is Electromagnetically Compatible if

- it does not disturb any other apparatus to operate as intended,
- and has an adequate level of immunity to electromagnetic disturbance enabling it to operate as intended.

European Directive 89/336/EEC on Electromagnetic Compatibility provided for the free movement of electromagnetically compatible goods. It came into force in 1992. The Directive provided a transition until 1996 during which time manufacturers could choose

- to meet the provisions of the Directive
- or to meet any national regulations of the member states.

7.3.2 *Transposition and expected impacts*

In 1995 the Hungarian Government issued a Decree on the tasks of various authorities regarding legal harmonisation (Decree 2403/1995). The decree was based on the recommendations of the White Book. Consequently, in 1996 the Ministry of Industry, Trade and Tourism received the task⁴ of preparing the legal harmonisation of the following areas:

- Industrial safety, safety of machines: 13 Directives, including the Machinery Directive (89/392).
- Metrology: 1 Directive.
- Electrical Equipment: 2 Directives: LVD (73/23) and EMC (89/336).
- Consumer Protection, Consumer Information: 14 Directives, including Directives as Toys (88/378) and General Product Safety (92/59).

Prior to formulating the decree adopting EMC, the Ministry commissioned a Pilot Impact Study⁵ on the impacts of introducing EMC. The main motivation for the Ministry to commission the impact study was to learn the opportunities and threats involved in the adoption of EMC and depending on them, to adopt the Directive with or without a transition period. The research called upon the opinion

- of some 20 manufacturing and service providing companies of the electrotechnic, electronic, medical and other instrument, telecommunication and related industries, trade associations and laboratories,
- and of all enforcing bodies.

The main findings were as follows.

Hungarian manufacturing companies:

- Among Hungarian manufacturing companies EMC awareness is satisfactory, but in the manufacturing companies there are no managers solely responsible for EMC and EMC-related costs are not separable from other manufacturing costs.
- Foreign owned firms welcome the measure because compliance helps to integrate Hungarian subsidiaries into the international organisation.
- Dynamically developing firms, companies exporting to the EU and companies producing mass goods welcomed the measure either because compliance costs were low or because they hoped to gain additional competitive edge as opposed to other companies.
- The same set of companies were likely to install in-house EMC laboratories to enable continuous measurements while the production goes on. In case of middle sized instrument manufacturers the median investment cost of such laboratories was in the range of 0,1% of the yearly turnover.
- Companies not exporting to the EU, smaller companies and companies manufacturing many types have seen the measure as a costly burden.
- Companies producing goods very sensitive to human safety (medical devices, lifts) are used to strong requirements, and welcomed the measure as contributing to the image of their profession. On the contrary, manufacturers of electric heaters and refrigerators have seen the measure as superfluous.

Other companies:

- Importing firms welcomed abolishment of double certification.
- Laboratories, measurement instrument manufacturers and measurement instrument distributors welcomed the adoption of EMC as good to business.
- Service providers, wholesalers and retailers of electric goods hoped to delegate the problem to their suppliers.

Enforcers: Regarding the abolishment of obligatory certification for a wide scope of electrical goods due to the Directive, enforcing institutions and the designated laboratory for obligatory certification were not convinced that self-certification was a sufficient tool to prevent

- EMC related offences,
- the placement of electromagnetically incompatible goods on the market.

⁴ Reported by I. Winklerne: "Adoption of EU Directives". Hungarian Industrial Review (Ipari Szemle) 1996 No. 1.

⁵ Prepared by K. Binning and P. Futo, co-financed by the British Know How Fund.

As a result of the study, the Ministry was convinced that opportunities offered by the adoption of the Directive far exceeded its threats. The Directive was adopted as Decree 31/1999 (VI. 11.) of the Minister of Economy and of the Minister for Transport, Telecommunication and Water Management. The text of the Decree is a translation of the main body of the Directive. For companies and enforcer institutions no transition period was given - except for goods which were imported, and their Conformity Declaration relied on certifications issued in foreign countries. In these cases the Hungarian certification body retained the right to accept the foreign certification or not. However,

- after signing a mutual conformity recognition agreement between the EU and Hungary,
- or after Hungary's accession to the EU

(whichever occurs first) the Directive will be adopted fully. After that the free movement of goods which are certified by notified bodies in the EU cannot be stopped in Hungary.

7.4 The EMC Directive in Great Britain

The legislation of the United Kingdom enacted the EMC Directive in 1992. The Directive was transposed into UK law under Statutory Instrument SI 1992 No. 2372. Principal enforcing institutions are the Trading Standards Offices of the local authorities. Persons committing an offence under UK EMC Regulations are liable to imprisonment for a term not exceeding three months or a fine not exceeding 5.000 Pounds.

Soon after enactment policies were devised and put into practice to help the adjustment of the companies to the requirements of the Directive, for supporting them in using the export possibilities opened by the Single Market Project of the EU. To alleviate fears of many in the industry, especially the small businesses, the British Department of Trade and Industry, within the framework of its Action Single Market Unit has started an EMC Awareness Campaign⁶ (1993 - 1995) by taking actions as

- producing a document called "Minimising the cost of meeting the EC Directive EMC"
- publishing training materials for companies such as the "EMC Workbook"
- setting up EMC Clubs
- supporting the creation of EMC Test Laboratories Association
- and initiating the publication of the "EMC Journal".

Compliance costs were informally estimated

- as an additional 5% for mass produced goods,
- but much more than that for companies which produce only a small number of low cost items.

In 1996 the Department of Trade and Industry commissioned a study⁷ of the effect that the EMC Directive has had on industry. The study was carried out between October 1996 and February 1997 by an independent EMC consultant, Brian Jones. The study was aimed particularly at the small to medium size companies but also took into account the views of larger companies and Trade Associations. The survey of small businesses of less than 100 people was done from a random selection of 130 companies from the Dun and Bradstreet Trade Directories. 62 companies actually took part of which 44 considered themselves to be covered by the Directive. The views of the enforcers, i.e. of the Trading Standards Officers were also sought through a selection of 18 Departments across the country plus an overview from their co-ordinating body.

The main findings of the study were as follows.

In the UK many companies are still very confused on the consequences of the regulation. Larger businesses have been able to cope more readily with the EMC Directive since they have the infrastructures, systems and manpower to carry out the necessary testing and control. The regulation clearly has some negative impact particularly for small companies who cannot absorb the testing and equipment costs and regard this as just another of their many bureaucratic burdens.

⁶ Reported by A. Finch: "UK Implementation of the EMC Directive" and by A. McLeod: "Implementation of the EMC Directive - a view from Industry" Papres presented to the Regulatory Impact Assessment Seminar, London 1996.

⁷ Reported by Malcolm Burchall C.Eng. FIEE. The original article appeared in the UK EMC Journal and is available on the Internet.

Standards Committees are regarded as being unrepresentative and dominated by vested interests such as test equipment manufacturers, large manufacturers and supply utilities. Standards lack stability. With new and updated standards companies have insufficient overlap period to allow for redesign and re-tooling.

As of the enforcers, the survey found that this is only one of many Directives that the Trading Standards Officers have to police and most are doing it on a reactive rather than a pro-active basis. Many of the Trading Standards Officers do not have the required expertise and there is no money or time available to train them. This is being aggravated by the recent changes in the local authority structure.

The study has come up with a list of 39 Recommendations which aim at profoundly changing the legal and institutional framework of ensuring electromagnetic compatibility of electric products, in fact urging for a simplification of the EMC Directive. The Recommendations were forwarded to the Department for Trade and Industry.

8. Appendix: Methodological documents of the research

8.1 Data Gathering Tasks

Note: This document is not a Regulatory Impact Appraisal methodology yet, only a list of facts to be gathered, interview questions and desk research topics.

8.1.1 Outline of the legal analysis

- ·What is the essence of the regulation? (1) Scope. (2) Aims: Free movement of products, Safety for use, Safety requirements, (3) Procedures: Conformity Assessment Procedures. (4) Legal Context: Relationship between LVD and other Directives. Needed: The text of the LV Directive.
- ·What are the main differences between the present Lithuanian regulation(s) and of the LVD? Note: the impact study measures the impacts which are attributable to these differences, the legal changes.
- ·Is a new regulation needed in Lithuania or the earlier one(s) are covering the Scope, Aims and Procedures of the LV Directive? Which regulations will lose their force if the LVD will be transposed? Needed: The text of related Lithuanian regulation(s).

8.1.2 Outline of the institutional analysis

LVD is a free movement directive which means that it forbids for Lithuanian government bodies to stop the free circulation of electrical equipment which are safe for use and this safety is proven by the conformity assessment documents.

How is the free movement of safe electrical equipment institutionalised and enforced? Specifically: (1) If a Market Surveillance institution (such as State Quality Inspectorate) stops an otherwise safe product, where can the producer / importer company appeal to? Under what law? What is the institutional set-up of Market Surveillance institutions? (2) If Customs stops an otherwise safe product, where can the company appeal to? What is the institutional set-up of the Customs? How is Customs controlled regarding its activity of stopping the products? Under what law does it operate when stopping or not stopping the products?) (3) Which other institution is entitled to stop products?

Which sector of the public administration, which public institutions were / will / must be affected by the introduction of the LV Directive? (such as Market Surveillance System, Customs, etc.) How, and to what extent? Specifically: What new tasks will arise / what old tasks will discontinue for the Public Administration in its activity to monitor, control and enforce the objectives (such as free movement of electric products, safety for use of electric products) of the Directive to be introduced? Will it be (1) easier than before or (2) more difficult than before to monitor, control, enforce, whether these objectives are met: Will it be possible to enforce the transposed LV Directive, to follow, whether it is complied by - or not?

Which sector of third party institutions were / will / must be affected by the introduction of the LV Directive? (Third parties: Product and manufacturing process certification bodies, safety testing houses, etc.) How, and to what extent? What is the present regulation of third party institutions? How many of them are. Specifically: their name, what is their size, ownership structure, what are their prices, turnover, experiences and acceptance / rejection statistics related to product conformity assessment? Are they prepared to the Notified Body status or other EU-relevant accreditation or certification? If did, under what circumstances? If it didn't why? If such a change of legal status can be noticed, than which Lithuanian law's consequence it is, and the transposition of which EU Directive is this Lithuanian law? Obligatory certification for electrical equipment under the scope of LVD will stop. How will this affect the certification bodies? What is the extent of the problems they will face? What are the expectations of the various agents regarding self-certification?

8.1.3 Outline of the economic analysis

Main question: What kind of companies and consumers will be influenced by the changes in the regulation, and how? Which – what kind of - companies (big/small sized, owned by Lithuanians and / or foreigners, mainly importing, mainly producing or mainly exporting ones, applying special technologies etc.) will be affected by the changes of the regulation? Why, how? To which extent?

Recipients of the impact, i.e. economic agents to be covered:

- Producers of the equipment covered by LVD
- Service providers: Companies providing services using the equipment covered by LVD
- Wholesale and retailing companies placing on the market the equipment covered by LVD
- Exporters of the equipment covered by LVD (EU and non-EU separately)
- Importers of the equipment covered by LVD (EU and non-EU separately)
- Consumers: Corporate and Household users of the equipment covered by LVD
- Analysing laboratories providing tests, legal advice and preparing technical files for the equipment covered by LVD

The type of impacts to be checked for the relevant economic agents:

- Compliance costs: for whom and how much, due to (1) enhanced safety requirements (2) more tests and measurements (3) more complicated administrative conformity assessment procedures
- Compliance costs that are not due any more (double certification), i.e. less expenses for (a) exporters to the EU and (b) importers from the EU due to removal of obligatory certification which now often forces them to double certification (i.e. certification of products already certified in the EU)
- Enforcement costs for market surveillance and for third parties
- Sales decrease for companies with obsolete goods
- Sales increase for EU companies and for companies already exporting to the EU
- Sales decrease for certification hoses due to removal of obligatory double testing
- Risks: more safety risk to consumers which is attributable to (1) the removal of obligatory certification and (2) poorly enforced safety regulations of electric products.

Detailed questions:

- Will as a consequence of the new regulation the trade between EU and Lithuania become easier? How will the change in the regulation influence the trade between Lithuania and non-EU countries, with special respect to Lithuania's main trade partners in the countries of the former Soviet Union?
- ·What are the risks involved here? (E.g. unsafe products reaching the market)?
- Extent and balance of costs, benefits, risks.
- Did any Economic Agent, pressure group, trade association, business interest group, etc. protest against the law, or demand a transition period? If somebody did so, where and who?
- Do some companies have in-house laboratories? How typical it is, in which type of companies and since when? Are investments into in-house laboratories to be expected which are attributable to the introduction of LVD?
- Will the change in the regulation influence only the electrotechnical and electronic industry or also other segments? Which ones?

Winner / loser analysis:

- ·Which Economic Agents will be positively affected by the changes?
- ·Which Economic Agents will be badly affected by the changes, why and how?

Desk research topics:

- ·Some facts of official statistics on the above mentioned Economic Agents: number of companies / laboratories, turnover, staff, ownership, size structure.
- ·Some facts of official statistics on the market of the equipment covered by LVD (export, import, local consumption broken down by corporate and household demand)
- ·The lists and statistical tables should be interpreted with the help of the Association of Machines and Appliances Industry Enterprises.

Finally we will need to make a balance, a very rough, using very approximate magnitudes of the above impacts, and wherever it is possible, in Litas

8.2 Questionnaire to companies

Conformity Assessment of electrical equipment made EU compatible

8.2.1 Background of the survey

PHARE and the European Committee under the Government of Lithuania conduct a Regulatory Impact Analysis in order to determine the costs and benefits related to the transposition of EU directives connected to conformity assessment of electrical equipment. We are making a survey on the impacts of the introduction of the Low Voltage Directive (73/23 EEC) into Lithuanian legislation. As for impacts, in particular we are interested in the

·costs and

·benefits

to various agents of the economy, such as

·companies and

·testing houses.

This Directive will change the present regulatory praxis regarding the safety of electrical equipment profoundly. Compliance by the safety requirements of the Directive will be a condition for putting the CE mark on electrical products within certain voltage limits. The limits are as follows: between 50 and 1000 Vac or between 75 and 1500 Vdc.

The Directive has been transposed into Lithuanian regulation (Technical Regulation of the Ministry of Economy and of the Standardization Department, October 1999, No. 351/61). It will come in force in 2001. For electrical equipment under the Low Voltage Directive the main differences between the previous and the new regulation are as follows. The following statements were not fully true under the old regulation and they are fully true under the new one:

·Compulsory certification system will be removed and the option of compliance assessment made by the manufacturer will be offered

- Electrical equipment may be put on the Lithuanian market only with CE mark affixed. Free movement of goods having CE mark shall be provided. Electrical equipment already having CE mark put on them in countries other than Lithuania do not have to be certified in Lithuania again, regardless where they have been manufactured and whether they are household or capital goods.
- Competition between conformity assessment and certification organizations will be encouraged in order to make conformity assessment simpler, quicker and cheaper.

This survey has the aim of assessing the costs and benefits arising from the above changes.

The questions below are directed to companies producing / importing / exporting electrical equipment between 50 and 1000 Vac or between 75 and 1500 Vdc. Another set of questions will be devised for testing houses.

Please answer the questions below, if they are relevant to your Company. Your answers can help

- to measure the impact of this Directive and
 - to introduce it into Lithuanian legislation in a way which
 - minimizes unnecessary costs
 - and maximizes benefits
- related to this regulation.

The research has been designed in a way as to motivate companies to answer the questions below.

- Your opinions will be incorporated into the impact study and they will influence the rule-making process.
- The data of your company will not be disclosed in the study.
- You will receive a complimentary copy of the Regulatory Impact Assessment.
- Answers to all numeric questions have to be only estimates, not exact data.

8.2.2 Questions related to electrical equipment generally

Please give an estimated number of pieces of electrical equipment (between 50 and 1000 Vac or between 75 and 1500 Vdc) produced / imported from EU / imported from non-EU / exported to EU / exported to non-EU / sold in Lithuania currently

Number of types (between 50 and 1000 Vac or between 75 and 1500 Vdc) produced / imported from EU / imported from non-EU / exported to EU / exported to non-EU / sold in Lithuania currently (One type is defined as something which needs a separate conformity assessment / certification).

Name the most important (up to 5) types of electrical equipment produced / imported from EU / imported from non-EU / exported to EU / exported to non-EU / sold in Lithuania, which are operating between 50 and 1000 Vac or between 75 and 1500 Vdc.

8.2.3 Safety and in-house activities

How important is the question of the safety of electrical equipment in your company? Why? How does this influence development / design / production / import / export of these products? How does this influence the organization of your company and the training of your employees? Could you estimate the total costs related to the safety of the products and give some breakdown of it?

Does your company have in-house testing facilities in Lithuania?

- If not: does your company plan to set up such facilities, and for how much money?
- If yes: Which type of conformity assessment is the company able to produce on its own? What were the fixed cost of setting up in-house facilities and what are the yearly recurring costs of operating it? Which type of conformity assessment is produced in co-operation with a testing house?

What would be the additional costs as expressed in percentages of re-designing, upgrading the (a) the products of your company (b) the products manufactured by competitor companies in order to meet all the safety requirements of LVD?

Does your company have a quality assurance system introduced according to the ISO 9000 series? If yes, how did / does it influence the safety of electrical equipment produced / exported / imported / sold domestically by your company?

8.2.4 Safety and the linkages of the company

Is your company a subcontractor to another company, providing parts or components to electrical equipment assembled by the buyer company? If yes: what percentage of your domestic sales / exports is involved? How important is the safety of electrical equipment / component / part provided by your company in the working relationship between your company and the buyer company? How, in what form does this question appear in the co-operation between the two companies?

Does your company have subcontractors, which provide parts or components to electrical equipment assembled by your company? If yes: what percentage of your production costs is involved? How important is the safety of electrical equipment / component / part provided by your subcontractor in the working relationship between your company and the subcontractor? How, in what form does this question appear in the co-operation between the two companies?

Related to the safety of electrical products, did your company have any interaction with (a) government authorities (b) courts (c) consumer associations (d) trade associations (e) chambers of commerce? If yes, what type of interaction (such as complaints, trial, interest representation, etc.)? Could you give a very short description of the most typical such interaction?

Does your company have product liability insurance? If yes: to what extent does it cover risks arising from the safety of electrical equipment? How did / does it influence the safety of electrical equipment produced / exported / imported / sold domestically by your company?

8.2.5 Costs associated with Conformity Assessment Procedures

What are the total yearly costs associated with conformity assessment and certification? Can you give a breakdown of these costs (In-house tests, buying or translating of standards, manpower costs, services bought from laboratories)? What are the costs per type associated to conformity assessment and certification? What are the costs per pieces sold? Can you give a breakdown of conformity assessment costs

- in fixed costs, occurring only once (e.g. investment, organization development, etc.),
- in yearly recurring costs (e.g. costs of tests done yearly)

How many people are responsible for conformity assessment and certification of electrical equipment in your company? Does your company have a separate department for organizing / doing / buying conformity assessment of electrical equipment?

If your company is a subsidiary of an international company: are there company-owned production sites in other countries, which are used to assess the conformity of electrical products produced / imported / exported by this subsidiary? Please give some details on the assessment done with the help of the mother company.

Does your company obtain conformity assessment and certification services from laboratories, testing houses, certification bodies in Lithuania? If yes: Which laboratories? How many types per year need to be assessed / certified for conformity? What is the approximate yearly cost of conformity assessment / certification that has to be paid to these laboratories? What is the breakdown of this cost (a) as for types of products or (b) as for conformity assessment types (safety, electromagnetic compatibility, etc.) (c) as for individual laboratories? Are you satisfied with the services of these laboratories? Why?

Does your company buy conformity assessment / certification services from laboratories, testing houses, certification bodies outside Lithuania? Please answer the same answers on types and on costs as formulated above, for Lithuanian laboratories. Are you satisfied with the services of these laboratories? Why?

Is conformity assessment / certification in Lithuania more difficult than in other countries your company is active? If yes: why? What do you think, how in the future competition between laboratories / testing houses would influence the services / speed / prices of these testing houses?

Are there product types produced / exported / or imported / sold in Lithuania by your company for which double assessment / double certification is necessary? (Double assessment or repeated certification means that the type has been tested / certified outside Lithuania but has to be tested / certified again due to present regulation.) How much money could your company save if double assessment was eliminated for imported product types which had previously already obtained CE mark in other countries?

8.2.6 Questions on the impacts of transposition of LVD

Did your company experience technical barriers to trade? Did your company experience difficulties on the ground of to the safety of your products when your company wanted to put its products on the market? If yes: on which market? Please describe the case.

Did your company have to comply by the Low Voltage Directive (a) when exporting (b) when importing (c) when working as a subcontractor (d) when buying parts and component from a subcontractor?

What other product safety directives of the EU apply typically to your products? (Machine Directive, EMC Directive, etc...)

Do you expect EU-compatible regulation of the safety of electrical equipment help your company? In particular: does EU-compatibility of the conformity assessment / certification procedures have an impact

·on the production / import from EU / import from non-EU / export to EU / export to non-EU / sale domestically of your company?

·on the investment activity of your company?

·on the competitors and on the competitiveness of your company?

If yes, please describe for each of the above questions, how does it affect your company, on which markets, in the field of what product groups, and to what extent? If there are expected benefits for your company, please describe them. If there are costs or risks, please describe them.

If there was a possibility of postponing the transposition of the LVD by 2 years, would you be in favour of this transition period? Why? What would your company do in this time?

Due to LVD's introduction, which are the "winner" companies and why?

Due to LVD's introduction, which are the "loser" companies and why?

8.2.7 General questions on the company

Number of employees of company

Turnover of company (1000 Lt), of which electrical equipment , %

Value of production done by the company (1000 Lt), of which electrical equipment , %

Value of export activity done by the company (1000 Lt) of which electrical equipment , %

Value of import activity done by the company (1000 Lt) of which electrical equipment , %

Value of wholesale activity done by the company (1000 Lt), of which electrical equipment , %

Value of retailing activity done by the company (1000 Lt), of which electrical equipment , %

Value of service provision done by the company (1000 Lt), of which services done by the help of electrical equipment , %

Please describe the evolution ("a short history") of the company in the last 10 years in the following terms:

- Growth. (Is the company growing or contracting in terms of number of employees, production, organisation?)
- Re-organisation process (Is the company the successor of an earlier big socialist-type company? Is the company a new ("greenfield") investment?)
- Ownership structure and privatisation. (Is / has become the company member of a national / international holding? If yes, which one? Percentage of foreign (not Lithuanian) ownership in the company, percentage of private (not public) ownership in the company.)

8.3 Compilation of company sample

The sample should contain companies which produce, import or export products which are under the scope of LVD.

Sample size: a total of 10 to 20 companies.

Sample composition: There should be specimen of

- Mainly importing - Mainly producing and selling locally – Mainly using the equipment as service providers, e.g. utility companies
- One company of each sub-sector (Nace=29, 30, 31, 32, 33) as described in the statistics, but it is good if we have low technology (e.g. lamps), middle technology (e.g. freezers) and high technology (e.g. medical instruments)
- medium sized (20 to 250 employees) and big companies
- Vilnius based and not Vilnius based companies

The sample should be interpreted with the help of the Association of Machines and Appliances Industry Enterprises.

Access to companies: The companies should be visited either personally, or reached for their opinion per fax, e-mail or telephone. A meeting with representatives of several companies is also a very useful method of accessing them.

Questioning method: A suitable mixture of (a) interview and (b) questionnaire method should be followed using the available (1) Questionnaire and using the (2) relevant parts of the Data Gathering Tasks as an interview outline.

8.4 Classification of LVD-related company costs, benefits and activities

Company costs according to incidence

- Once-for-all costs (e.g. setting up test laboratory in company)
- Costs per type (e.g. testing product in testing house)
- Costs per pieces manufactured (e.g. materials and parts built into product, such as isolator, shielding)

Company costs according to regulation type

- Safety related costs before this regulation
- Safety related costs after this regulation
- Difference: costs due to regulation (Incremental cost, may be negative)

Table 25
A system of company activities influenced by compliance

Market research	To determine importance of product safety and in particular compliance by LVD on the market
Product design	Buying and implementing LVD related standards. Designing proper choice of components (insulators, grounding cables, shieldings) Performing development tests
Production and Assembling	Performing in-house tests. Proper insulating, grounding, cabling, shielding, grounding. Monitoring manufacturing process.
Organisation/Management	Delegating LVD implied, product safety-related responsibilities to persons and boards. A senior manager must personally carry the legal responsibility for ensuring his company's products comply with the regulations. A control board must be set up to ensure that LVD controls are maintained. Resources must be allocated to implement LVD measures effectively. At the start of the product development programmes compliance by LVD should be taken into consideration. To include LVD implied product safety into ISO 9000 quality assurance system.
Training of workforce	Courses, books, conferences, etc. Staff must be trained to ensure they understand how their job can affect LVD related performance of the products.
Certification	Demonstrating compliance by tests
Documentation	Preparing, handling product safety-related documents
Marketing, Sales	Using LVD implied product safety related advantages on the market. Feedback to production.
Installation, Maintenance, Upgrading	Surveying installation environment before operation Proper cabling, shielding, grounding.

Long term costs may be reduced by considering LVD implied product safety early in a product's development cycle. LVD implied product safety should be considered an integral part of the product development process.

State costs

- Set-up costs (e.g. setting up new government bodies);
- Annual support for public institutions (e.g. upgrading institutions of the Market Surveillance System);
- Support for third party institutions (e.g. notifying and transforming existing official test-houses into EC-type bodies);
- Project dependent costs (e.g. LVD Awareness Program);
- Inspection, monitoring and enforcement costs.

Table 26
Some benefits of the introduction of LV Directive according to actors

Lithuanian economy	Introduction of technical and trade oriented EU directives is pre-requisit of Lithuania's EU membership
Lithuanian manufacturing companies	An incentive to adopt to expectations of international markets
Companies importing from and exporting to EU	Simplification of Lithuanian certification procedures
Lithuanian subsidiaries of international companies	Standardisation of operations of branches
Users of low voltage products	Safer equipment

9. Appendix: Useful Internet addresses on the Low Voltage Directive

Text of the Directive:
<http://www.safetylink.com/lvd.html>

LVD Frequently Asked Questions:
<http://www.netc.ie/lvdfaq.htm> __ <http://www.netc.ie/lvdfaq.htm>

LVD Guidelines:
<http://www.nsai.ie/LVD> __ http://www.nsai.ie/LVD_,
<http://www.europa.eu.int/comm/public.htm>
http://www.world.std.com/~techbook/seec2_4.htm

Virtual conference:
<http://www.rcic.com/cnf/treg/1996/list283.htm>
<http://www.rcic.com/cnf/emc-pstc/1997/pstc3108.htm>

10. Appendix: Detailed statistical overview of the relevant Lithuanian industry and trade

Table 27
Data on industrial sectors
Lithuania, 1997

NACE sector	Name of sector	Total industrial production (at current prices, without VAT and excise, in thousand Lt)	Index of industrial production (1995=100)	Structure of industrial production by activity (Total industrial production = 100%)	Sales of industrial production in foreign markets (Total production = 100%)	Sales of industrial production in foreign markets (in thousand Lt)	Number of enterprises (sole proprietors excluded)	Number of employees in industrial activity
29	Manufacture of machinery and equipment	572 993	74,5	2,8	64,0	366 716	104	16 027
30	Manufacture of office machinery and computers	9 022	87,6	0,1	18,4	1 660	12	971
31	Manufacture of electrical machinery and apparatus	454 080	178,6	2,2	70,6	320 580	39	5 883
32	Manufacture of radio, television and communication equipment and apparatus	505 993	118,9	2,8	81,1	410 360	31	9 293
33	Manufacture of medical, precision and optical instruments	147 697	50,7	0,7	54,1	79 904	39	3 173

Source: Lithuanian Department of Statistics.

Table 28
Number of enterprises (without sole proprietors)
according to the number of employees
Lithuania, 1997

Sector name	Number of employees						
	0-9	10-19	20-49	50-99	100-199	200-499	over 500
Manufacture of machinery and equipment	26	8	19	19	17	8	7
Manufacture of office machinery and computers	8	1	0	0	2	0	1
Manufacture of electrical machinery and apparatus	13	6	3	5	3	7	2
Manufacture of radio, television and communication equipment and apparatus	10	4	6	2	2	4	3
Manufacture of medical, precision and optical instruments	15	6	8	4	2	3	1

Source: Lithuanian Department of Statistics.

Table 29
Production of main electric equipment commodities
Lithuania 1997

Manufacture of machinery and equipment	
Compressors for freezing equipment (thousands)	106,0
Refrigerators and freezers (thousands)	236,8
Manufacture of office machinery and computers	
Automatic data processing machines	743,0
Photocopying apparatus	1624,0
Manufacture of electrical machinery and apparatus	
Electric and AC motors (thousands)	481,0
Insulated wire and cable sets (thousands)	3185,0
Manufacture of radio, television and communication equipment and apparatus	
Television picture tubes (thousands)	1624,0
TV set (thousands)	51,9
Transformers for TV and displays (millions)	0,9
Tilting systems, kreipimo sistemas (millions)	2,7
Manufacture of medical, precision and optical instruments	
Electricity supply meters (thousands)	898,0

Source: Lithuanian Department of Statistics.

Table 30
Foreign trade, Lithuania, 1998
Million Lt

Code	Products name	Export	Import	Balance	Export within total Lithuanian export amount (%)	Import within total Lithuanian import amount (%)
Section XVI	Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	1 606	4 264	-2 658	10,8	18,4
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	649	2 513	-1 864	4,4	10,8
85	Electrical machinery and equipment and parts thereof; sound recorders and producers, television image and sound recorders and reproducers, and parts and accessories of such articles	957	1 751	- 793	6,4	7,6
	Total Lithuanian foreign trade	14 842	23 174	-8 331	100	100

Source: Lithuanian Department of Statistics.

Table 31
Regional breakdown of foreign trade. Lithuania, 1998
Million Lt

Code	Products name	Export to the EU	Import from the EU	Export to the CIS	Import from CIS	Export to other countries	Import from other countries
Section XVI	Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	616	2 583	535	387	454	1 293
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	143	1 582	338	283	168	647
85	Electrical machinery and equipment and parts thereof; sound recorders and producers, television image and sound recorders and reproducers, and parts and accessories of such articles	473	1 000	197	103	286	646

Source: Lithuanian Department of Statistics.

Table 32
Regional breakdown of foreign trade. Lithuania, 1998
The region's share from total export or import, in percentages

Code		Export to the EU as % of total export of these products	Import from the EU as % of total import of these products	Export to the CIS as % of total export of these products	Import from CIS as % of total import of these products	Export to other countries as % of total export of these products	Import from other countries as % of total import of these products
Section XVI	Machinery and mechanical appliances; electrical equipment; parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	38,37	60,58	33,34	9,09	28,3	30,33
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	22,02	62,96	52,08	11,29	25,9	25,75
85	Electrical machinery and equipment and parts thereof; sound recorders and producers, television image and sound recorders and reproducers, and parts and accessories of such articles	49,47	57,16	20,61	5,93	29,92	36,91

Source: Lithuanian Department of Statistics.

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Institution / Company	Names of persons	How to reach
Association of machines and appliances industry enterprises	Mr. A. Gapšys	Telephone Vilnius 62 59 32
Association of machines and appliances industry enterprises	Mr. A. Šimkevičius	Telephone Vilnius 31 25 20
Certification Body of State Enterprise „Infostruktura”	Head of the Certifications Department Mr Algimantas Stulgis and Senior Expert of the Certification Department Mr Edmundas Cepe.	Pilies g. 23/15, Vilnius 2001, tel. 79 13 26.
Certification Centre for Electric Equipment (EGSC)	Head of the Centre Mr Vytautas Kersys	Kaukysos 18, Vilnius 2600, tel. 600006
Certification Centre for Electric Equipment „Sertika”	Director Mr Romualdas Algunas and Mr. V. Birstonas	Savanaorio av. 271-253, Kaunas 3009, tel. 27-314434
Committee for the European Integration under the Government of Lithuania	Head of Department Mr. Klaudijus Maniokas, Director of the Integration Strategy Mr. D. Zeruolis	Telephone Vilnius 61 00 71
Ministry of Economy	Ministry of Economy, Industry Competitiveness Department, Chief Specialist Mr. I. Kaliskis	
National Accreditation Bureau	Head of Bureau Mrs Irena Mikelionienė	T. Kosciuskos g. 30, Vilnius 2600, tel. 70 93 56
State Quality Inspectorate	Chief Inspector Mr Jakevičius	Vilnius
JSC „Elga”	Director General Mr R. Volbekas, Engineer of Marketing Department Mr R. Griskus, Engineer-constructor Mr. R. Lašinis	Pramones 12, Siauliai 5419, tel. 21-540116, Telephone 21 – 54 05 92
JSC „Elpava”	Mr. Valdas Šilal	
JSC „Fasa”	Director Mr V. Vasiliauskas	Sporto 9 , Marijampolė 4520, tel. 243-70 77 2

Institution / Company	Names of persons	How to reach
JSC „Lietkabelis”	Technical director Mr A. Tarailis, Export director Mr. V. Narkevičius	J. Janonio 4, Panevėžys 5319, Telephone 25-463556, 25-4631735, 25-46 76 73
JSC „Skaiteks”	Director General Mr A. Adamonis and Managing Director Mr S. Diugelis	Aukštaičio 7, Vilnius 2600, tel. 62 84 15
JSC „Snaige”	General Constructor Mr Arvydas Paketuras, Quality Director Mr. A. Madzajus	Pramonės 6, Alytus 4580, tel. 235-77 79 3
JSC „Velga”	Head of Technical Service Mr. N. Čekanauskas	Telephone Vilnius 23 77 11
JSC „Vilniaus Vingis”	Mr. V. Jedamenko, Technical Director R. Savickas	Telephone Vilnius 39 27 98
JSC Siemens	Manager Mr. R. Latkauskas, Automation & Drives Department	Tel. Vilnius 391519
Ltd. "Lietuvos Eltika"	Marketing Director Mr. Pocius	
Ltd. „Eksma”	Director General Mr. R. Kraujalis	
Ltd. „Elpava”	Manufacturing director Mr. V. Silale	Telephone Vilnius 23 59 39
Ltd. „Katra”	Design Department Manager Mr Robertas Balčikonis	Taikos pr. 113, Kaunas 3036, tel. 27-25 40 39
Ltd. „Siauliu Tauro Televizoriai”	Quality Control Director Mr G. Miežanskas and Mr R. Jackūnas	Pramonės pr. 15, Siauliai 5419, tel. 21-45 24 45
Ltd. „Vikama”	Chief Constructor Mr. V. Girdzijauskas	Telephone Vilnius 61 28 86