World Bank Reimbursable Advisory Service on Higher Education Financing in Latvia

Information Note

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31 July 2014

I. Objectives of Information Note

This 'Information Note' is a precursor to the World Bank's final deliverable for its Reimbursable Advisory Services on Higher Education Financing in Latvia[1]. The primary objective of this note is to provide an outline of options for a future funding model as a way to stimulate feedback from the MoES and other higher education stakeholders. The Bank's team can then incorporate the feedback to refine its ultimate recommendations. It is important to emphasize that the funding model options outlined in this report are still subject to feedback from key stakeholders, so they may not necessarily align with those in the Bank's final report, which is expected to be delivered in September.

The proposed options included in this note result from (a) the strengths and weaknesses previously identified for Latvia's current approach to funding higher education[2]; (b) the World Bank team's international experience assessing or supporting the reform of systems of higher education financing; and (c) feedback from stakeholders (e.g., MoES, rectors, academic staff, students, etc.) in Latvian higher education.

This note is organized into five sections, including this first section on the document's objectives. Section II provides a reminder of the normative criteria used to define a "good" higher education funding model, since they are now central to the new model's design. Section III outlines some of the core challenges of Latvia's current funding model and translates them into requirements for the new model. A description of the different components or options for the new funding model are then detailed in Section IV, and the final section, Section V, describes how different levels of funding for higher education may impact Latvia's transition to a new funding model.

II. Requirements for a New Model

In prior phases of this engagement, the Bank's team identified and confirmed criteria for good funding models - mainly derived from European trends and international practice - with representatives of the MoES and representative stakeholders of Latvia's higher education system. Whereas these criteria were applied to Latvia's current higher education funding model to determine its strengths and weaknesses in the Bank's first report, they now become requirements or expectations of the proposed model. Table 1 summarizes the intentions of each criterion.

[1] The Ministry of Education and Science engaged the World Bank, a long-standing external partner, to recommend a reformed financing model that takes into account jointly developed criteria and feedback from the MoES, good international practice, and stakeholder consultations. The engagement began in December 2013 and is tentatively scheduled to conclude in September 2014. To accomplish its objectives, the project has been planned for three stages, each with corresponding deliverables. The first stage in the project's methodology was an assessment of Latvia's current approach to financing higher education, and the outcomes of this phase are detailed in a report dated 18 March, 2014. The second stage of the project focused on how well the current financing approach aligns with the policy objectives specified by MoES and resulted in the Bank's report dated 18 April 2014. In the final stage, the focus is on proposing reforms for Latvia's higher education financing system, specifically those that can be accomplished in the medium term, i.e., the next three-to-five years.

[2] For more information, see both "Higher Education Financing in Latvia: Analysis of Strengths and Weaknesses" dated 18 March 2014 and "Assessment of Current Funding Model's 'Strategic Fit' with Higher Education Policy Objectives" dated 18 April 2014.

Table 1: Overview of assessment criteria[3]

Strategic Orientation	Promote national strategies Promote institutional profiles Create performance rewards and sanctions Create a competitive environment
Incentive Orientation	Provide clear, non-fragmented incentives Avoid undesired effects Balance *ex post* and *ex ante* performance orientation*
Sustainability	Stability* Guarantee continuity in funding mechanisms Allow long-term planning* Take into account cost differences Promote risk-spreading and management*
Legitimization	Provide unambiguous and balanced funding structures Make funding transparent Support the perception of fairness Allocate lump sums* Guarantee academic freedom
Autonomy and freedom	Implement an adequate level of regulation Guarantee autonomy of internal resource allocation* Promote accessibility of diverse income sources*
Practical feasibility	Use available data Ensure administrative efficiency Respect methodological standards Ensure coherence with funding levels and steering approaches

* Only relevant for institutional funding, not for student funding.

III. Addressing the Main Challenges of Latvia's Current Financing Model

This section summarizes the primary challenges associated with Latvia's current approach to financing higher education and research according to 1) the aforementioned categories of criteria and 2) an assessment of how the current funding model fits or aligns with Latvia's policy objectives for higher

[3] "Higher Education Financing in Latvia: Analysis of Strengths and Weaknesses" dated 18 March, 2014

education[4]. These challenges are then reinterpreted as requirements for the new model. Consistent with the organizing structure of the Bank's prior reports, the observations are organized by the four elements of a funding model for higher education:

- State funding for teaching and research (allocation of state budget via study places and public research funding)
- Diversification of financial sources for higher education institutions (EU funds, tuition fees, market revenues, external research income, etc.)
- Financial autonomy of higher education institutions (lump-sum versus line-item allocations, freedom to spend money flexibly and build financial reserves, financial regulations, discretion to set salaries, etc.)
- Student funding and support (the individual financial situation of the student, loans, scholarships, etc.)

Category	*Main Challenge for Current Model*	*Requirement for New Model*
State funding (teaching and research)	Latvian higher education is underfunded, especially in terms of public funding**,** in comparison to most other European countries and to its own governmental objectives. It is likely that structural underfunding leads to restrictions in performance and quality problems in all respects (teaching, research and service), as well as to problems with international competitiveness of the sector.	To create a "package deal" by modernizing the financial model and strengthening its link with policy objectives, which should make for a strong case to increase the level of public funding. New model needs to create added value in terms of stimulating working towards more strategic orientation and national objectives in order to justify the possible increase of public funds.
	Study place model and state research funding model are not creating meaningful and appropriate performance incentives for HEIs. The model does not offer significant incentives for improvement of teaching and research quality, employability of graduates, research productivity and internationalization.	To introduce teaching and research related performance-based funding elements in order to create financial incentives for higher education institutions to produce desired outputs and outcomes.
	Study place model and research funding streams (including EU Structural Funds) can be administratively burdensome and do not always contain clear and transparent incentives for diversifying institutional profiles, consolidation activities between HEIs, collaboration between research organizations or with external partners (specifically industry).	To offer clear and transparent incentives for diversifying institutional profiles, consolidation activities, incentives to promote collaboration between HEIs, research organizations and external partners. To create a model which as much as possible minimizing administrative burden.
	Funding model lacks alignment of basic funding of teaching and research. Divided funding streams for teaching and research impede an alignment of the HEIs core	To lead to a closer alignment of teaching and research streams in overall architecture of state funding.

[4] For more information, refer to "Assessment of Current Funding Model's 'Strategic Fit' with Higher Education Policy Objectives" dated 18 April 2014.

	missions of teaching and research.	
	State funding model is rather "one-dimensional" and static as a whole, as it offers HEIs only limited incentives for promoting national higher education strategies and strengthening institutional profiles. More specifically, it is lacking two important pillars of funding, namely performance-oriented funding and innovation-/profile-oriented funding.	To make a transition towards "3-pillar model" consisting of pillars of (1) basic funding, (2) performance-oriented funding, and (3) innovation-/profile-oriented funding for achieving greater balance between stability, performance-orientation, ex-post and ex-ante incentives.
Diversification of financial resources	High reliance on tuition revenues (education) and EU Structural Funds (research) likely to harm the long-term financial viability of HEIs. At the same time, income from private sources like industry or community services appears to be relatively underdeveloped.	To support further and more balanced resource diversification (both public and private resources) to reduce too high and potentially harmful HEI resource dependencies. Provides long-term funding for long-term activities.
Financial autonomy of HEIs	Latvian HEIs enjoy significant financial autonomy and, as such, can flexibly, efficiently and effectively spend their resources and act as competitive organizations. HEIs do not always use the autonomy they have. This great level of autonomy is not always accompanied with a high level of accountability towards external stakeholders (both public and private).	To enable state and institutional decision-makers to make full use of the potentials of autonomy. Supporting greater accountability by emphasizing performance measurement with regard to the volume and quality of teaching and research. However, increased use of accountability measures should not affect negatively the level and scope of HEI's financial autonomy.
Student financing	Dual track system (i.e. state supported study places and tuition fee funded study places) with merit-based selection of students for state-funded study places is likely to subsidize full-time students from better-off socioeconomic backgrounds. Current student support system is highly decentralized, and its strong merit-based emphasis (incl. the requirement to find a loan guarantor) is likely to have negative impact on access and participation in higher education especially in the case of students from disadvantaged backgrounds, and to some extent, part-time students.	To ensure accessibility and participation by introducing more need-based elements in student funding system (state supported study places, scholarships, loans, and other subsidies) as a whole. Centralized coordination of allocation of student support needs to be increased.

The final report will explicitly evaluate the recommended model against the criteria in section II and the requirements of section III.

IV. Options for a New Funding Model for Latvian HEIs

This section provides an overview of the desirable elements and suggested features of a new funding model for Latvian higher education.

Importantly, a new funding model could help to overcome the political blockades caused by the public versus private good debate and the current underfunding of higher education in Latvia. Higher education

is a mixed good, so it needs mixed funding. It is, however, clear that the current level of funding, especially public funding for higher education in Latvia, is not sufficient. It is not clear how fast this situation could be changed (see the subsequent section that addresses different funding level scenarios), but it is evident that proposals for a new funding system must acknowledge that the current system is substantially underfunded. The potential to improve the system and to realize the potential benefits of a new model are directly related to funding levels. Considerations of higher education funding levels in Latvia should not be mixed up with the funding levels of the education system as a whole.

On the other hand, funding increases should not be realized without changing the system. It is difficult to argue for a larger investment in a suboptimal structure; on the contrary, the potential for additional funds is greater if it is clear how those funds will add value to the system and advance policy objectives. If the features of a new model described herein are realized, then this will lead to such an added value.

An important feature of the recommended funding model for Latvia is "balance". To be balanced is an important orientation for the reform in several respects:

- A balance between stability and incentives;
- A balance between input- und output-orientation;
- A balance between ex ante funding of innovations and ex post rewards of performance;
- A balance between the promotion of national objectives and institutional profiles;
- A balance between teaching and research as criteria of funding (plus an alignment of both in the funding model);
- A balance between basic across-the-board funding of research and focused, prioritized funding of research excellence;
- A balance between public and private sources of funding;
- A balance between needs and merit based student funding;
- A balance between accountability and autonomy.

Such a balanced approach does not exist at the moment but would result from the following features of a new model.

Some of the recommendations are closely related, others do not depend on each other. In the following paragraphs quite a number of recommendations will be given. The relationship between the issues is not always the same: sometimes they only make sense if they are combined, in other cases it would even be worthwhile to realize one element without the other. Nevertheless, together they form a coherent model. Important aspects are:

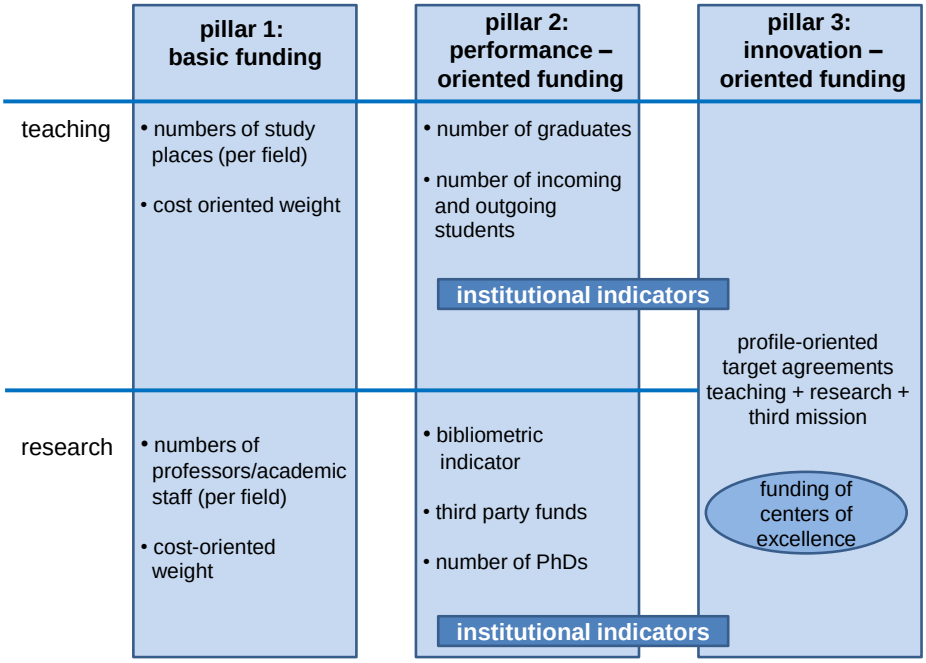
- The implementation of a new state funding model could be done without reforming the student funding system at the same time (and the other way round).
- Within the state funding model in the end a combination of all pillars is desirable,but new pillars could be implemented in a phased approach or one after the other.
- A general tuition fee model (and even the existing tuition fee model) definitely has to be linked to the proposed reforms for need-based student support and student loans.

The state funding model would benefit from a three-pillar model. In such a model, stable funding is combined with a performance-oriented component, using a formula with performance indicators, and an innovation-oriented component allocated by target agreements. The performance part rewards and sanctions past performance (ex post funding), whereas the innovation-oriented component provides financial support for the attainment of future objectives determined by a negotiation between university and ministry (taking into account state goals and institutional profiles). This also means that performance measurement and target agreements are no longer bound to the study place model but constitute separate

elements of the state funding model. Because teaching and research are partially separate but also interrelated activities, the funding mechanisms should reflect this with both separate and aligned approaches. There is, however, one multi-component public funding model which aligns teaching and research oriented allocation criteria.

The basic features of the three-pillar model for Latvia are described below; figure 1 provides an overview.

Figure 1: Three-pillar model of state funding



The first pillar would still mainly consist of the study place model. The study place model with its input-oriented planning approach remains an important element of the state funding system, since it continues to create a stable funding base. In the new model, however, the study place allocation is not intended to cover the true cost of the educational experience. Unlike the current model, the institutions would be intentionally expected to cover the cost of teaching and research from all sources of the 3-pillar-model, whereas the study place model is limited to the component of basic funding. In addition, it is difficult to set an integral funding level that does justice to the potential influences of differences in costs between disciplines, types of institutions, locations and historical differences in contexts.

The ministry would still conduct periodic studies on the costs of delivering discipline-specific educational programs, but the intent is to understand the relationship among different areas of study as opposed to the precise cost. The relative cost relationship across different programs is then employed in the funding model as 3-5 different funding or tariff bands (e.g., social sciences, science & engineering, medical programs, arts – which would mean a simplification of the current cost coefficients). If it is determined that programs in science and engineering, for example, cost approximately 1.5 times more than those in the social sciences, then the amount allocated for a study place in science and engineering would be 1.5 times the amount for a study place in the social sciences.

Keeping in place the study place model is predominantly meant to guarantee some base level funding. It is not the objective of the study place model to provide an exact representation of the precise costs per student or a proportion of that. The study place model, however, provides stability within the overall system. The relationship to the politically decided number of study places indicates the socially desired

balance between disciplines. This is the function of the first pillar. This tranche of funding should be topped up with the other funding elements, such as the performance based second pillar and profile- and target-oriented third pillar funding. Thus, keeping the first pillar funding as a basic financial foundation of the system allows for space in the public budget in order to also allocate performance and profile oriented funding at levels that will create real incentives within the system.

The study place model must become less complex and more transparent, flexible, and strategic. The process to determine the numbers of study places should be optimized. A revised study place system would work in the following way:

- The ministry plans the overall numbers for study places in different disciplines. The immediate emphasis is on the upcoming year, but a multi-year outlook is provided as guidance to institutions, students, and stakeholders. This plan is informed by stakeholder consultations (especially regarding employer needs), labor-market forecasts, and data on the development of real demand. The overall target numbers for fields for the Latvian system would be published. This results in an incremental change from the plan's starting point, which would be the current number of study places per field and institution. From this starting point certain overall increases and decreases per field are planned, and a certain percentage of the study places could be used for innovative programs suggested by the institutions. Reallocations of study places between universities are possible (putting an end to the practice of generating funds for new study places only from existing ones in the same institution).
- The ministry makes an offer to each university, as part of the annual communications around the target/performance agreement, mentioning the planned increases and decreases per field and inviting the institution to offer places in new programs. The university develops a proposal, and the ministry makes a final decision based on the available budget and quality of the proposal. For added transparency, the Higher Education Council or an independent panel (MoES representatives, institutional representatives, employers with international experts) may serve an advisory role in allocating new study places. Through these proposals, the universities compete with their best arguments for additional places or to establish new innovative programs. The private universities could take part in this competition regarding the pool of innovation-related study places, so they have an equal chance to gain study places with curriculum innovations (but private institutions won't become full part of the system, as they are not subject to the overall study place planning and funding but could only get funding for innovative programs). Each university could decide if they want to offer full-time or part-time study places; a part-time place would be apportioned based on the student's progress towards degree (e.g., rewarded with 50% assuming that half-time studies are a feasible model). There is no in-period micro management of study places by the ministry.
- The amount allocated per study place in each discipline or field (e.g., social science, medicine, etc.) would be based on the costing relationship among the study fields (i.e., cost coefficients described earlier) and on the available budget for study places (basic funding). Their relationship is analyzed and, if necessary, updated based on studies of the current cost structures in HEIs.
- As long as the real number of students per field and per year does not fall below or exceed a certain amount of the study places planned (e.g., +/- 5%), there is no reaction by the state. If these thresholds are reached, this will have an impact on the ministry's offer for the next period (by a negotiated adaptation of study places to demand).
- Periodically, the ministry could conduct a review of the study places in a specific field (e.g., around every 3-5 years but probably also only if needed). So the incremental approach per field would be

questioned from time to time and the review could lead to broader reallocations. The review could use criteria such as proposed cost of programs, qualifications of academic staff, employment rates upon graduation, research activities, employer partnerships, student satisfaction, etc.

- The current system with different line ministries involved should either be integrated or be replaced with a mechanism in which the funding incentives and levels are more closely related for comparable institutions. The aim here is to create a more level playing field for teaching and research throughout the system. This would require a process of inter-ministerial collaboration and adjustments that would need to be addressed by an inter-ministerial committee.

The first pillar also includes a per-capita funding component per number of professors or academic staff to enhance the available basic funding and to align teaching and research funding. The current basic research funding for research institutes inside universities should be discontinued, as it restricts the university's potential to use research funds flexibly and – according to the recent research evaluation – does also not guarantee that research funds are allocated to real centers of excellence. Therefore, some basic research funding should be integrated into the first pillar by a per-capita premium per professor or academic staff (which of course does not mean that the money goes directly to the individual, as it should be used within the university strategically to promote publications or other agreed research outputs, allow networking in research, etc.). Like in the study place model, there could be a weight according to the relative cost situation in different disciplinary clusters. Research funding follows a twofold strategy: on the one hand, widely available basic funds to strengthen the autonomous use of funds by the universities (as just described), and on the other hand targeted investments in a few centers of excellence (related to the third pillar).

The second, performance-oriented pillar contains a small number of indicators derived from national strategies and of general relevance for all HEIs. The budget reserved for formula allocations and the percentage that each indicator takes from that sum are defined. The indicators are measured for all institutions and the available budget per indicator is distributed according to the share of the institution's related to overall performance. For instance, if the number of graduates is used, a university that "produces" 10% of the graduates will receive 10% of the budget allocated by numbers of graduates. The ministry also has the option here of implementing some weighting on graduates in certain disciplines (e.g., science and engineering graduate could be weighted more heavily than a social science graduate) or smoothing the allocation by assessing 3-year averages rather than annual fluctuations.

Latvia's policy objectives suggest a variety of output-driven performance metrics that could be part of a formula. The following indicators with across-the-board relevance for universities are worth considering (but subsequently require a political decision concerning priorities):

- Number of graduates. This is complementary to study places and addresses output. It creates incentive to minimize drop-outs (or to induce inevitable drop-outs early);
- Numbers of PhDs, to stimulate PhD „production";
- Numbers of incoming and outgoing students, to address the internationalization objective;
- A bibliometric indicator, to stimulate dissemination of research findings;
- Third-party funding of research and teaching, to reward and stimulate the generation of external income. A higher weight for funds from European sources could be considered, given the assumption that there is a high preference for that kind of financial source.

The weights between the different indicators would be decided by the ministry according to policy preferences. A balanced representation of teaching and research indicators is being recommended. The Higher Education Council could be involved in this decision. If the plans for comprehensive alumni surveys/tracer studies are realized, an employment-oriented indicator could be added.

Part of the allocation under the second pillar is reserved for institutional performance indicators which are university-specific and related to the profile and strategic development of the institution. One of the political objectives is to strengthen the profiles of HEIs in Latvia. For instance, there are some universities with a research focus, and there are others with more focus on knowledge transfer or regional engagement. Similarly, internationalization does not play the same role for every institution. This leads to a situation where specific performance criteria do not have equal importance for every institution. Innovation, smart specialization and knowledge transfer are highly relevant areas where objectives should be set and rewarded, but not in the same way for every university. If the ministry wants to promote internships in industry, this is also not of equal importance for every field and HEI. To take all this into account, the formula should contain an element with institutional performance indicators (specific for each university and agreed upon in the target agreement). The individual indicators represent major strategic objectives. An institution could have up to three specific indicators with university-specific weights. This part of the formula needs a different algorithm: as the indicators per institution differ, a formula is needed that makes the outcomes comparable and the distribution calculable. This could be done by analyzing the progress made in reaching the goals (measured by percentage of change in individual indicators and comparing the percentages between the universities).

The third, innovation-oriented pillar provides funding for activities that contribute to the targets set in a university target or performance agreement. The targets take into account national priorities and operationalize university profiles and strategies. The contract between the ministry and each university would be renewed every three years. This target agreement (which is different from what now exists in Latvia as a contractual arrangement) refers to national goals and the university strategy, and it defines a limited set of priorities for the universities in the coming three years. Whereas the performance-oriented (Pillar 2) component of the target agreement is focused on selecting a few relevant indicators that are specific to the institution's mission, the third pillar is assessing more broadly how the institution will contribute strategically to Latvia's higher education vision, mission, and objectives. The priorities must naturally address teaching and research, but they should also extend to all kinds of third mission and knowledge transfer activities. The target agreement also defines innovative measures to be taken to achieve these goals if there is a need for pre-funding of actions. This funding comes from a pool of money and is defined per action. The indicators to measure success regarding the priority areas are defined in the target agreement (and used in the second pillar as mentioned above). The target agreements follow a standard format discussed between ministry and universities and subsequently defined by the ministry (the final report will include a proposal for this format). National goals could also be integrated by mentioning some state priorities for actions to be taken.

Activities aimed at the longer-term development of university profiles are rather represented in the third pillar of state funding than in the allocation of EU Structural Funds. The current use of Structural Funds does not always reflect a secure, sustainable, long-term perspective on funding. It is, therefore, important to get long-term goals and developments into the "normal" funding model or annual operating budget. Through integration in the target agreements, there is a periodic assessment of success every three years, but a longer-term perspective for renewal is possible. Looking at current strategic goals, there is a strong emphasis on the establishment of joint doctoral schools with non-university research institutions, post doc programs and the international accreditation of study programs. These developments should become elements of the target agreements. The ministry announces that these aspects will be among the prioritized activities, and the universities then take this into account when drafting performance agreements.

The third pillar also contains the funding of research centers of excellence, taking into account evaluation outcomes and a national strategy for research priorities. As said above, the funding of research institutes

is replaced by widespread per-capita-funding. This research component would be part of the university's lump sum allocation and combined with focused funding for a limited number of specific research units (i.e., centers of excellence) with the capability to generate internationally competitive research outcomes. The latter is included in the target agreement. The ministry defines the criteria for a center of excellence, the universities prepare proposals, and a peer review supports the selection process (in the first round the results of the recent research evaluation could be used). It is possible (or even promoted) to have cooperative centers by several universities or universities and research institutes.

European Structural Funds continue to help modernize the higher education and research sector and also focus on short-term change processes and the diversification of funding sources. A parallel debate is underway in Latvia on the appropriate use of European Structural Funds in the higher education and research sector. It is recommended that the incentives set through Structural Funds align with those in the new funding model for higher education and research, such as to stimulate quality, performance and for example attracting young research talent. As Structural Funds generally have a temporary and short-term character, these funds can particularly support important immediate changes, such as the following:

- Incentivize the generation of other income streams. Resource diversification beyond tuition fees and the EU Structural Funds is key to a sustainable financial developement of the higher education and research sector in Latvia.
- The implementation of „knowledge vouchers" (according to the Dutch system) that allow small and medium enterprises to finance cooperation with universities, thus stimulating viable university-industry relations.
- The set up of a sector consolidation incentive program to create economies of scale and scope through voluntary strategic cooperations or mergers between programmes and/or institutions, and to create quality and critical mass by linking with societal partners (similar to the process in Denmark which was not centrally planned).

There is no need to change the rules of financial autonomy, but more transparency would be beneficial. By comparison, financial autonomy in Latvia is ahead of broad European developments. There is no need to change the existing regulations. But financial autonomy and transparency of funding are two sides of a coin. Universities have to publish an annual financial statement of revenues and expenditures, avoiding for instance the situation that major parts of the revenues are declared as "other". Transparency is the basis for trust in the capabilities to deal with financial autonomy. Another element of transparency is annual reports addressing progress against the target agreements.

Decision-makers at some institutions should be encouraged to make more use of the financial autonomy they have. To reap the benefits of financial discretion, university managers have to be highly qualified in planning, budgeting, and financial management. To ensure this, several actions are recommended: trainings and capacity-building activities in financial management are provided to clarify and illustrate the potentials of financial steering and planning, and examples of best practices (or of problems) are shared so that all institutions become aware of their opportunities and limitations, for example, by benchmarking financial strategies. The profound experiences with financial management in the higher education institutions are a good basis to implement peer learning activities.

As a separate issue, tuition fees are likely to remain part of the Latvian higher education funding system. However, the current approach to tuition fees would need to be restructured. Instead of the dual track there could be a general cost-sharing model. To avoid the current socially selective effects on the one hand, the number of (partially) state-subsidized study places would be enlarged (to an amount around the current total number of students). But on the other hand, as a general principle, all students have to pay a

share of the cost of their study place. The state could set the shares per discipline together with the numbers of study places. The shares could be differentiated according to cost or labor market perspective of the field, or according to policy preferences (for example, lower tuition fees for STEM in order to make such fields more attractive to students). This general principle secures the income stream from tuition fees and reduces social selection (in combination with the following recommendations on student funding).

Means-tested or needs-based financial aid can widen access and address equity concerns. The current practice of having scholarships fund only the very best students would be discontinued, and merit-based considerations become a second-order criterion. Students from disadvantaged social backgrounds/low income families would be eligible for a scholarship to refinance the private cost share. The continuation of such a scholarship would be decided every year based on the performance of the student (e.g., completion of modules/ECTS or grant turns into a loan). Needs-based elements require a mechanism to determine the financial need of students, which could be established in cooperation with the Ministry of Welfare. Part-time students would also be eligible for need-based scholarships. The scholarships would primarily cover tuition fees, but students in need could also apply them to cover living expenses, if the pool of funds allows for it.

Student loans are made available to everyone by introducing a general state guarantee. The private guarantor for student loans is replaced by a state guarantee. So everyone (all full- or part-time students) is able to get a student loan. The state could introduce a merit-based element: If a student belongs to the X% best graduates, a certain part of the debt is remitted. Student loans can be partially related to tuition costs as well as to the cost of living. Both scholarships and loans would ideally be administered by a central authority to guarantee students in different programs and institutions have equal opportunities and transparency in the system to underpin their study choices.

The funding model should not be regarded as an isolated instrument; it needs to be part of a more comprehensive steering model. It is important to set favorable framework conditions by complementary reforms in other areas. The effects of a funding model result from its interaction with other elements of higher education planning and steering. Several favorable conditions would maximize the effectiveness of the new model; listed below are a few:

- A strategy on national research priorities and focused strategic plans of the higher education institutions;
- A valid and trusted national data base to track key indicators. Synergies with existing data sets should be realized. For instance, it could be interesting to take the development of the U-Multirank dataset into account, where indicators for the individual objectives in target agreements could be found;
- Information to inform student study choices. Again, the comprehensive data system provided by U-Multirank, including data from student surveys, could help students to compare different study options. An additional initiative providing important data is the establishment of an alumni database and information about labor market perspectives collected from alumni;
- A robust quality assurance process, the outcomes of which should inform the system, institutions, students, and parents in an objective way;
- A reasonably level of inter-ministerial coordination to create transparency and consistency in funding incentives, methods, and levels when multiple ministries are involved in higher education funding;

- Similar funding mechanisms ought to apply for teaching and research throughout colleges, universities, and research institutes to foster one singular (yet diverse) higher education and research system. The drivers behind each sector's allocation can reflect the primary activity area or emphasis for those institutions. As such, universities would have a stronger alignment of funding mechanisms for teaching and research, whereas colleges would be predominantly funded for teaching and research institutes for research.

V. Scenarios for a New Funding Model for Latvian HEIs

This section briefly presents three scenarios in which a new funding model for Latvian higher education could operate. The three scenarios are related to the extent to which the whole system can attract more funding from the state and, to a lesser extent, from private entities. This results in three scenarios which will be called:

A. Develop the knowledge society model
B. Limited expansion model
C. Optimizing scarcity model

For each scenario, a brief table is provided to clarify the components of the funding model described in the previous section that should be prioritized for implementation, and those aspects that would likely need to be postponed until sufficient funding was available to introduce them. In other words, the components "introduced when possible" should not be forgotten but would likely be postponed until enough funding was available to support their implementation. Additionally, the final row in each table briefly describes other options or alternatives to consider.

A: Develop the knowledge society model

The basic assumption in this scenario is that the government will have the opportunity and willingness to substantially increase its investment in higher education as originally envisaged. This would provide the system with a resource level that can support the various incentive mechanisms of the three pillar model.

Components Included	Components Introduced When Future Funding Levels Allow
• Revised study place model (pillar 1) • Basic research funding per faculty member (pillar 1) • Universal indicator-based funding formula (pillar 2) • University-specific indicator funding (pillar 2) • Performance/target agreements negotiated by MoES and each institution that cover both T&L initiatives and research/Centers of Excellence (pillar 3) • Provide financial management training and support for institutional management to maximize autonomy • Transitional use of Structural Funds (e.g., consolidation) • Some reliance on tuition fees in a cost-sharing approach • Need-based student aid (with merit component), as tuition fee waiver plus support of living costs • Enhanced student loan program with state as guarantor	• Not applicable
Additional Options or Alternatives for Consideration	
• Establish tuition levels to complement the amount of public funding for the sector (e.g., higher public funding could allow lower tuition fees)	

• "Innovation fund" for internationally competitive research in collaboration between higher education and/or research institutes, industry and international research organizations as a specific, separate part of the third pillar

For Latvia to transition to this or any reformed funding model, the MoES will have to prioritize and sequence initiatives based on significant sector consultation to ensure institutions and individuals are adequately prepared for the change.

B: Limited expansion model

In this second scenario, the amount of public funding enables limited investment increases in higher education. The main difference is that the system will not likely have enough funding to support fully the components in pillar 2 or pillar 3. In order to make better progress towards Latvia's higher education policy objectives, this scenario emphasizes the performance/target agreements for each institution as a way to agree on the expected contributions of each institution in exchange for the funding received from the state. It also integrates some needs-based elements of student funding.

Components Included	Components Introduced When Future Funding Levels Allow
• Revised study place model (pillar 1) • Performance/target agreements negotiated by MoES and each institution • Continued financial autonomy and support for institutions • Transitional use of structural funds (e.g., consolidation) • Increased reliance on tuition fees • Need-based student aid but only as fee waiver • Provide financial management training and support for institutional management to maximize autonomy • Modified student loan program • Limited teaching innovation fund provides start-up capital for promising new programs with enough resources to seed about x initiatives per year under the assumption that y programs will be sunset (this would occur on a larger scale under pillar 3 in scenario A)	• Basic research funding per faculty member (pillar 1) • Universal indicator-based funding formula (pillar 2) • University-specific indicator funding (pillar 2) • Funding to cover both T&L initiatives and research centers of excellence (pillar 3)
Additional Options or Alternatives for Consideration	
• With the higher private cost-share (i.e., tuition), a portion of those additional funds (e.g., 20%) must be immediately reallocated as need-based aid to support students unable to afford the tuition fee • Relative funding model based on the numbers of new entrants, students, graduates, PhD's according to 3 different funding tariffs (social sciences, science & engineering, medical programs) and relative success in attracting 3rd-party funding • Repurpose EU Funds into an 'Innovation Fund'	

C: Optimizing scarcity model

The third and final scenario is designed around a situation in which the government cannot afford to make additional investments in higher education. This scenario is completely geared towards optimizing the current funding levels and mechanisms towards the strategic objectives that receive highest priority in Latvian higher education.

To be clear, the current system is significantly underfunded in comparison to not only other European countries but, importantly, also vis-à-vis the government objectives and legally-set targets per study-place. Acknowledging that Latvia has many competing demands for its limited resources, flat funding will continue to negatively impact the quality of higher education and thus jeopardize the country's competitiveness. Without any incremental funds, there is minimal capacity to reform the financing model. Allocating fewer or even the same amount of resources differently may create substantial volatility within the system. Although the components may look similar in Scenarios A and B, the anticipated outcomes, as they relate to quality and the pursuit of policy objectives, are expected to be significantly lower in this final scenario.

Components Included	Components Introduced When Future Funding Levels Allow
• Revised study place model (pillar 1) • Performance/target agreements negotiated by MoES and each institution (no additional funding for financial incentives unless funds are pulled from the study place model – not to be recommended under this scenario) • Provide financial management training and support for institutional management to maximize autonomy • Transitional use of Structural Funds (e.g., consolidation, innovation funds, etc.) • Further increased reliance on tuition fees • Repurpose merit-based scholarship to need-based student aid	• Basic research funding per faculty member (pillar 1) • Universal indicator-based funding formula (pillar 2) • University-specific indicator funding (pillar 2) • Funding to cover both T&L initiatives and research/Centers of Excellence (pillar 3) • Need-based financial aid • Modified student loan program (based on need and state as guarantor)
Additional Options or Alternatives for Consideration	
• Maintain the study places model but add a fixed allocation per student to include a premium per graduate with both using different funding tariffs (social sciences, science & engineering, medical programs) • Allign allocation mechanism of Structural Funds with those of the Science Council and operate a few programmes for competitive research funding, one based on academic criteria, one on collaboration with private partners and one on international collaboration for EU funding • Limited scholarships based on need and merit	