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Market-Driven Investment Strategies to Implement the Bioeconomy Policy

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The Finnish economy is in dire need of industrial renewal. In the last two years, the government has put forth a number of green strategies that aim at turning the ship. Addressing these strategies, this brief suggests a new financial instrument – the Multi-Asset Renewal Fund (MARF) – to leverage limited public resources to boost vast private, institutional investments into the renewal of Finnish industries.

Background

Over the last few years, the concept of Industrial Renewal has been used liberally in political, economic and corporate circles. Usually, this implies the refocusing or transitioning of an economy and its industry actors to stimulate growth, usually through technology and knowledge innovation. The question then from an economic development and political priority perspective is: *Which emerging industry do we want to transition the economy to, and what assets can we leverage to get there*? In response, a number of strategy-level research documents and roadmaps have been produced in recent years on how to create new economic growth and jobs in the CleanTech- and the Bioeconomies (Sitra, 2011; TEM, 2014a,b).

Industrial renewal and investment in the repositioning of existing assets towards a vibrant Bioeconomy can't be accomplished with traditional financing and subsidy approaches.

The Challenge

What both 'economies' have in common is that they are driven by a wide range of industry sectors; they emerge as a result of *newly converging value chains across traditional sector boundaries* and are not captured by conventional statistics. Hence, the contributions to growth and job creation in these value chains are difficult to assess and, more importantly, to promote. However, if Finland seeks to reposition the country as a flag-bearer of the Bioeconomy, there will be a need for understanding where the country can *capture value in the various value chains* that constitute the emerging industrial space. The respective *strategies must be resource-based*: value can only be captured where existing assets – both legacy industries and innovative young companies – are relevant and productive enough to be exploited in the new Bioeconomy paradigm.

Central to economic growth and job creation then is the design of new cross-sectoral financing models to 'turn the ship'. Sitra's 2011 report on the Sustainable Bioeconomy highlights

the risk and scaling factors of investing in bio-based companies. The Bioeconomy Strategy document (TEM, 2014b) followed up on the financing challenges, and specifically called for: (1) Financing *across sectoral boundaries* in the Bioeconomy, (2) *Bold experimentation* by finance providers, and (3) Deploying *financial instruments* for Bioeconomy projects.

> If we want to invest in – or grow – the Bioeconomy, we need to understand how it is organized and evolving, and where Finland has a competitive advantage. Absent this information, investments in companies and the selection of projects will be inefficient, and the impact on the economy and job growth marginal.

Bold experimentation is indeed called for in these times when SMEs – the innovative drivers of the Bioeconomy – seem to be let down by conventional bank lending models and *thirst for risk financing* in particular (TEM & VM, 2015). According to ETLA (2015), SMEs in the Cleantech space are already *suffering from poor profitability* in the barren financial landscape. Policy-makers are aware of the challenge and have reacted. For instance, Juha Sipilä – the expected prime minister-to-be – has proposed to establish a *growth fund* capitalized through the sale of government property.

Financial Innovation for Industrial Renewal

To address this innovation financing approach, investment policies need to be advanced where (1) the limited public funds help to *unlock investment opportunities* with *optimal risk-return profiles* for *institutional private investors* to drive the Bioeconomy, (2) the projects and the companies to be financed are selected in an efficient, *market-driven* way given the imperfect information about the prospects of individual projects and the combined effects on growth and job creation, and (3) the investments are at a scale that is *attractive to pension or wealth management funds*. The task is one of clever *financial engineering*.

One policy approach is public co-investment in highly leveraged *multi-asset renewal funds* (MARFs) aimed at '*economic development with market-driven returns*'. This is the focus of a Tekes-funded FiDiPro project between ETLA and Professor Adriaens at the Ross School of Business (The University of Michigan). Intended to attract pension funds and fund-of-fund (FoF) investors, the objective of MARFs is to leverage *public investment in industrial renewal along thematic value chains*, i.e. 'industry ecosystems'. As TEM's (2014b) strategic report indicates, the Bioeconomy is not a single industry or industry sector, but it is cross-sectoral. From pulp and paper to construction, and from the pharmaceutical industry to textiles, the *Bioeconomy is extremely heterogenous*. There are *emerging value chains* focused around new product development or services, such as biofuels and biochemicals, advanced materials, recycling and waste management. *But how do you invest in entire value chains?* One solution could be the MARF.

Fund Specifications

- Six month lock in (est. cost 1.5%)
- Direct public:private leverage ratio: 6–15
- Financial leverage ratio (GNE:NAV): 5
- Unencumbered cash ratio (UC:NAV): 25%
- Portfolio liquidity (assets): 50–60%

Design of Multi-Asset Renewal Funds (MARF)

The process for designing MARFs takes the guesswork out of company and project selection for maximum impact and investment leverage of public funds.

1. The funds are structured around *emerging value chains based on transactional relationships between cross-sector actors* in these ecosystems. For example, the bio-based feedstock value chain engages the agricultural, specialty chemicals, basic materials, and primary processing industries. Where in this system resides the value to create economic growth, and which Finnish companies are best positioned to lead?

2. The value system is comprised of large corporations (both traded and private), small and medium enterprises (SMEs), and new emerging companies. These companies vary in their capital structure, resulting in stock or bond investment, equity investment, or high-risk bank loan targets. What are the risk factors of these companies, from a strategic, financial and market perspective, and how do we sort them in relevant investment asset classes?

3. The MARF is *comprised of four asset classes*: SME *risk debt* (growth financing), *private equity*, a *thematic exchange traded fund* (ETF), and *infrastructure* financed through *bonds or project finance* (Figure 1). The combined asset risk and return profiles need to be attractive to institutional investors, while providing sufficient liquidity.

4. These 'all in' funds – i.e., investors can't select the allocation of investments between the fund's different asset classes – engage public financing through a *loan guarantee program* on the debt and infrastructure components, and seek to optimize and actively manage allocations to provide attractive returns to investors. This is where the policy innovation comes in.

Economic and Jobs Impact

The fund structure is aimed at optimizing investments for public:private capital leverage through market-driven returns for investors, while at the same time maximizing economic growth and job creation (risk debt and infrastructure project guarantees). High value infrastructure investments are regarded as having an economic multiplier of 2, while economic investment programs in new and growth companies have a job multiplier of 10. Given the specifications, a €250M MARF (€25–50M. public funds) has the potential to generate 7,500 new jobs and stimulate €1.5 bn. in economic activity, while generating 6–8% IRR net to investors. Doubling the investment to € 500M has an amplified effect, considering the financial leverage ratio from additional lending against the MARF's cash position, resulting in more than twice the jobs and economic activity. All impacts depend on asset class allocation assumptions for the MARF and availability of investable assets.

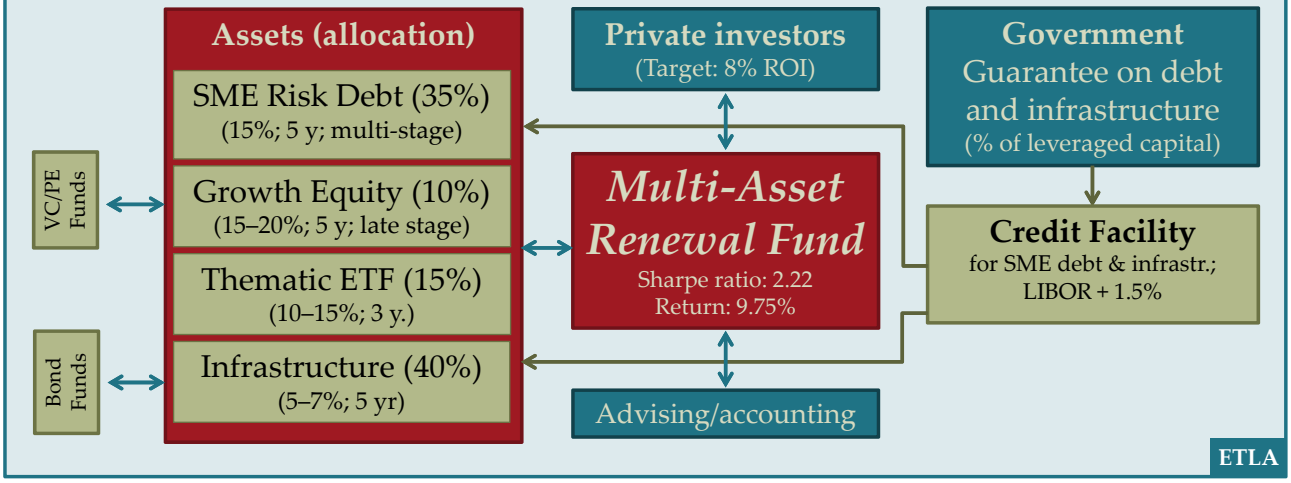
To conclude, below are answers to three questions that the MARF concept has frequently triggered:

1. How does this instrument relate to existing financing mechanisms?

Current financing mechanisms (e.g. Tekes, Tesi, Finnvera, Sitra) using public or private funds focus on company-specific investments, either as private equity, loans or grant programs. Aside from equity finance, the returns are based on bank interest rates. The MARF focuses on the value chain, a financial integration of multiple asset classes intended to engage pension funds and wealth management investors by offering attractive returns while driving economic development. Fundamentally, it is a market driven investment instrument that integrates components of existing financing mechanisms, except for grants.

1

The MARF harnesses market-based investments and leverages public guarantees to drive heterogeneous, cross-sectoral bioeconomies



2. How much more effective is this instrument in the use of public funds for output and employment as compared to existing financing schemes?

One of the key arguments for the deployment of a MARF is the economy of scale embedded in the financing instrument, the **direct** public funding leverage ratio, and the financial leveraging ratio. Given the type of investor that is targeted, the capital deployment needs to adhere to diversified investment objectives, with risk and return profiles typically associated with alternative assets, while adhering to portfolio liquidity. The Global CleanTech Cluster Association, in an article on cluster investment in Environmental Finance (2012), showed that 3 to 40 jobs were created per company from investments in the range of $3–35M. On the other hand, investments in clusters of 50–200 companies, a proxy for MARFs, were upwards of $200M. and generated 130–3,000 jobs. The projected efficiency gain from the economies of scale through MARF investments is a factor of 2–3. This does not take into account the output and employment from MARF infrastructure projects.

3. What is the track record of the MARF approach?

The MARF design approach to thematic investing has been tested and iterated with investors at Deutsche Bank Wealth Management (London), HSBC Global Debt and Alternative Investments (London), KBC Wealth Management (Brussels), the P80 Foundation (representing 80 of the World's largest pension funds), CIOs and Directors of Alternative Assets from Finnish pension funds (e.g. Elo, Ilmarinen, OP, VER), and Corporate Investments at Sitra. Currently, three commercial MARF designs are under discussion: (1) Bio-based chemistries (Antwerp-Ruhr-Rhein Chemical megacluster), (2) Smart mobility industry (Switzerland-Bavaria), (3) Sustainable mining (Pacific Northwest, US). Three MARFs will be designed under the FiDiPro project (Smart Grid, Smart Mobility, and Bioeconomy), and will be submitted for investment rating by Fitch in 2016.

"MARF-type investment instruments adhere to the jurisdictional context of the European Long-Term Investment Fund (ELITF) vehicle, as approved by the European Council in April 2015." – KBC Wealth Management

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