



28 August 2020

John Tansey
Executive Director, Policy & Strategy
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NSW Australia

Email: John.Tansey@customerservice.nsw.gov.au

Dear Mr Tansey

Re: Engineering Registration Scheme

The Australian Financial Markets Association represents the collective interests of around 110 firms in the financial markets including investment banks, brokers, operators, investors, energy companies, and traders.

As per our recent correspondence we are concerned that the legislated introduction of a registration scheme for Engineers may negatively impact a number of our members.

We raise no objections to the requirements in the Bill for the registration of Engineers in relation to Building Matters, and particularly multi-storey residential apartments and related mixed-use developments, as these matters are outside the scope of our concerns as an industry association.

We understand that there is still ongoing discussion around the extent of and limits to the scope of registration of Engineers that will be required.

AFMA supports limiting the requirement to matters related to building. We note that this is consistent with Recommendation 1 from the 'Building Confidence' Report which states:

That each jurisdiction requires the registration of the following categories of building practitioners involved in the design, construction and maintenance of buildings:

...
Engineer
...

The Building Confidence report was in response to a clear and substantial problem and identified a balanced set of appropriate recommendations that the Government is to be commended for implementing.

The case for requiring registration of Engineers for all work that might be categorised as involving "engineering principles" outside of building is less clear.

Professional registration schemes can have a valuable role to play in supporting consistent and current standards of professional competence. AFMA itself operates an analogous AFMA Accreditation for financial market professionals which is a scheme based around the Diploma of Financial Markets which AFMA teaches as a Registered Training Organisation. AFMA was also instrumental in creating and offering the relevant course on competencies in Business Conduct and Ethics.

On the basis of our work in this regard we appreciate the benefits that registration schemes can bring. However, it is important to recognise that these schemes also bring significant costs and potentially inefficiencies to industries if they are not carefully targeted. These costs are not just to the individuals but also accrue to the firm and the competitiveness of the industry. They include the cost of compliance and audits to confirm adherence to the requirements. It could also increase the business risks of employing engineers and undertaking engineering work. These additional costs may not be warranted when there is no risk akin to that associated with building construction and where there has been no demonstration of market failure.

Engineers are in high demand and are widely employed in the finance industry, particularly computer engineers. However, engineers from a wide variety of disciplines notably electrical, software, computational, chemical, civil, aeronautical and others are also employed. The range of roles engineers are employed in within the industry is broad and includes senior management, sector analysts, traders, data management, systems engineers, and many others. Many of the roles utilise elements of engineering but would likely fall outside the scope of the legislation. However, there are some roles that would likely be captured within the scope of the work outlined in the legislation.

Notably these would likely include work that is done on electronic systems used in computers. This work can involve designing and building electronic circuits, networks and systems that are used to do a wide range of tasks including:

- Make markets;
- Calculate risks through rapid simulations (e.g. Monte carlo);
- Manage risks through rapid hedging of responses to data inputs;
- Data mining and processing;
- Process market data;
- Rapidly process network data;
- Connect computers together through networks; and
- Artificial intelligence and machine learning.

The risks associated with these types of electrical engineering work are the same as those associated with software engineering and in our view should be treated as such. While the outputs of this engineering work are electronic hardware the design principles and many of the tools are very similar to those that are used for software design.

In addition to the costs to firms and individuals already doing this work, the establishment of a registration regime would put a formal barrier for firms looking to expand into this area of work. This may discourage the development and competitiveness of Australian businesses.

Software engineering is a case in point of why a more rigid, costly and mandatory approach to engineering registration is not an optimal approach for the economy. We note that software engineering is not on the prescribed list of engineering fields at s32(3). Software engineering is a standard field of engineering, but the work of software development is done by both software engineers and computer science given the cross over between the two fields. Requiring a registered engineer to undertake this engineering work would disallow most of the people who currently do this work from continuing to do so. Computer scientists who currently undertake

this work do not have engineering degrees they would not be able to qualify as engineers without full retraining. It would be enormously disruptive and would come at a cost of billions of dollars to the Australian economy.

The point here is not that software engineering should not be prescribed which we will take as a given, but the broader point that the economy has efficient ways of doing work that involves engineering principles and is not done "accordance with a document". Restricting that work only to registered professional engineers would be unnecessary, costly and potentially unworkable.

We expect that finance would not be the only industry that employs engineers doing engineering work in a way that does not have the same risks to public safety as building.

If a broader registration scheme is being considered AFMA would support this being done on the basis of a careful cost benefit analysis for each proposed extension. While it is true at any time, it is particularly the case with the current damage to the economy caused by COVID-19, that unnecessary regulations and schemes should not be placed in the way of economic activity unless there are sound reasons for doing so.

For more information or if you have questions in relation to our letter please do not hesitate to contact me at djeffree@afma.com.au or 02 9776 7993.

Yours sincerely

A handwritten signature in black ink that reads "Damian Jeffree". The signature is written in a cursive, slightly slanted style.

Damian Jeffree
Senior Director of Policy