

Regulatory Reporting Cost of the Thai Banking Industry: Impact of the Pandemic & Policy Recommendation

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Disclaimer: The opinions expressed herein are those of the authors. They do not purport to reflect the opinions or views of the Bank of Thailand or its members.

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Executive Summary

Since the aftermath of the global financial crisis, regulatory changes worldwide have led to higher demands for regulatory reporting. In light of the recent Covid-19 pandemic, moreover, regulatory reporting requirements have become even more onerous. Thailand sees no exception.

This paper provides first-ever estimates of the costs of regulatory reporting that the Thai banking industry faces. A total of nine commercial banks participated in the study by responding to questionnaires and attending subsequent in-depth interviews. The standard cost model was applied in order to quantify the burden.

The average annual on-going cost for banks is estimated at around 30 million baht (or just below 1 million dollars), resulting in the industry's total cost of around 1 billion baht per year. Human resources account for the largest proportion of reporting costs, reflecting a labor-intensive nature of the reporting process as evident in follow-up interviews with bank staff. On the other hand, IT is the main determinant of enhancement costs which are usually due to the introduction of new regulatory returns (or data requests). During 2020, reporting requirements due to the introduction of pandemic relief measures would have added at least an extra 7.83% to the total cost.

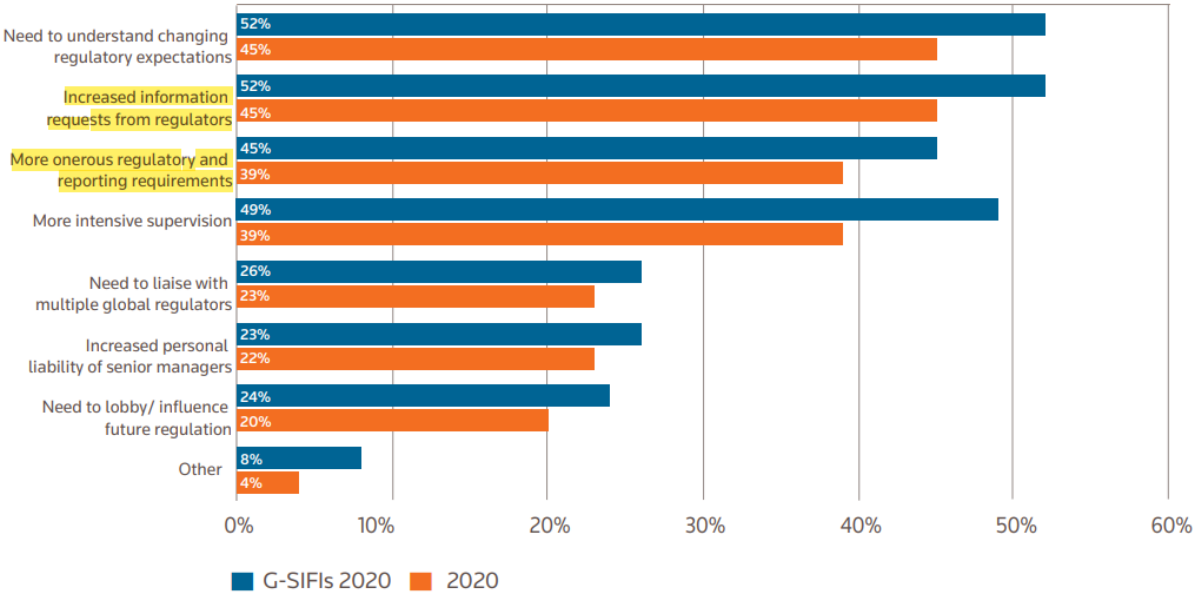
Larger banks tend to incur higher costs due to the scale of their operations. However, when controlling for size, large banks' reporting costs as a fraction of total operating expenses are 0.51 percentage point lower than those of small banks on average. In other words, the former group seems to enjoy greater economies of scale. At the industry level, regulatory reporting burden accounts for 0.31% of the banks' operating expenses. The figure is broadly in line with the EU experience.

Although the reporting burden of the Thai banking industry may not be excessive, it is important for the Bank of Thailand to keep such burden in check. The central bank's data governance could be strengthened by establishing a single data gateway in order to reduce unnecessary repetition and other irritation costs. More importantly, the least cost principle, or at the very least a cost-benefit analysis, should be applied when initiating new regulatory returns as they account for the majority of the incremental costs.

1. Background and motivation

Since the aftermath of the global financial crisis in 2007-2008, regulators worldwide have stepped up their role in guarding financial stability. As the Global Financial Development Report 2019/2020 writes, ‘the decade following the crisis was characterized by intense regulation of banking sectors across the world’. Naturally, such regulatory changes lead to higher demands for regulatory reporting. According to the Thomson Reuters Regulatory Intelligence Cost of Compliance Report (Hammond and Cowan, 2020), managing regulatory returns features quite heavily – about half of the participating firms expected to spend more time liaising and communicating with regulators because of increased information requests from regulators, while a slightly smaller proportion concerned about more onerous regulatory and reporting requirements. See Figure 1.

Figure 1: Top reasons for increased communications with regulators



Source: Thomson Reuters Regulatory Intelligence – Cost of Compliance: New decade, new challenges, by Susannah Hammond and Mike Cowan

Thailand is no exception, and the Covid-19 pandemic has accelerated the trend. Since 2020, the Bank of Thailand (BOT), which is the central bank and the main regulator of commercial banks, has administered multiple regulatory returns in relation to relief measures to alleviate the impact of the crisis, namely soft loan, payment holiday, and debt restructuring, among others. Most of these returns are to be reported every month, but some on a daily basis. The meeting between BOT

executives and representatives of the Association of International Banks (Thailand) in early 2020 brought regulatory reporting burden into attention. Later that year, the BOT launched the Data Regulatory Impact Assessment (RIA) and Regulatory Data Transformation (RDT) project to help reduce reporting burden of commercial banks and to improve the analytics capacity of the central bank to international standards.

Reporting cost consciousness is, in fact, an up-coming trend among regulatory bodies in order to keep their increased demands in check. The European Banking Authority (EBA) – mandated to measure the costs that institutions incur when complying with the supervisory reporting requirements – has targeted reporting cost reduction at 10-20% for small and non-complex institutions. The EBA is currently in the process of conducting a thorough cost survey in order to come up with appropriate recommendations (EBA, 2020). The Bank of England (BOE) has a cost-benefit analysis framework for data collection (BOE, 2006), and now aims to modernize reporting via common input, new instructions, and governance changes (BOE, 2020).

In order to come up with policy recommendations regarding regulatory reporting burden, a first and necessary step is to understand reporting costs. Based on a similar methodology in a report by the European Commission (EC, 2019), this study provides high-level estimates of the costs on commercial banks in Thailand, along with an analysis of the main drivers of those reporting costs. Using the standard cost model in monetization (see e.g. BOE, 2006), the average annual on-going cost for banks is estimated at around 30 million baht (or approximately 1 million dollars), resulting in the industry's total cost of around 1 billion baht per year. The findings can be benchmarked against international experience, and policy recommendations drawn.

The rest of the paper is organized as follows. Section 2 describes the research methodology, covering sample selection, information acquisition, and cost monetization. Section 3 presents results, and discusses key findings, also in relation to the international experience. The final section draws policy recommendations, and concludes.

2. Methodology

2.1 Sample selection

The scope of this study is limited to the banking sector which accounts for the largest share of financial sector assets. All commercial banks operating in Thailand are within the purview of the BOT. The sample includes 9 banks with a relatively equal proportion of large (5) and small (4) banks. The classification is based mainly on asset size.

2.2 Information acquisition

Two main methods were used to collect information on regulatory reporting burden: (i) Questionnaire; and (ii) Semi-structured interviews.

The questionnaire (see Appendix A) was intended to elicit information on costs, both quantitative and qualitative data. Banks were asked to estimate costs over the course of a “normal” year, say 2019. The original draft was developed based on a survey of literature, and finalized in consultation with staff from the Statistics Department. Eventually, the fillable form was sent to commercial banks via e-mail where the relevant BOT’s relationship managers also received a copy.

About 2-3 weeks following the administration of questionnaires, follow-up sessions were scheduled with four banks, all large, who had made enquiries about filling in the form. The purpose of these meetings was to clarify any questions that commercial bank staff might have, as well as to obtain further insights and additional feedback on regulatory reporting burden. Participants came from banks’ Compliance, IT, and various Business Units. All interviews were conducted on-line, in a semi-structured fashion based broadly on the questionnaire. The sessions were highly informative for improving the reporting process – a similar remark was made in the EC’s report (2019). During this period, some participating banks had already submitted their preliminary responses. All in all, it took about 6-8 weeks for banks to submit their final responses.

2.3 Cost monetization

Costs are categorized into two main types: HR and IT. All banks managed to provide total figures for both expenses. While these figures are subject to error in estimation, they appear to be accurate to the order of magnitude. Banks also supplied related FTEs (Full-time equivalent) and the number of IT systems which

were subsequently used for cross-validating responses according to the standard cost model formula:

$$\text{Total cost} = \text{Price} \times \text{Time} \times \text{Frequency}.$$

Total annual HR cost, for example, equals (annual) salary times FTEs. Responses show that implied salaries are of a similar order of magnitude across banks. A similar procedure was applied to IT costs.

Banks were given a clear instruction to consider costs that arise from regulatory requirements only – and not related to banks' own operations. However, because of the fact that such cost attribution cannot be done precisely, the reported costs may be overestimating the actual regulatory reporting burden.

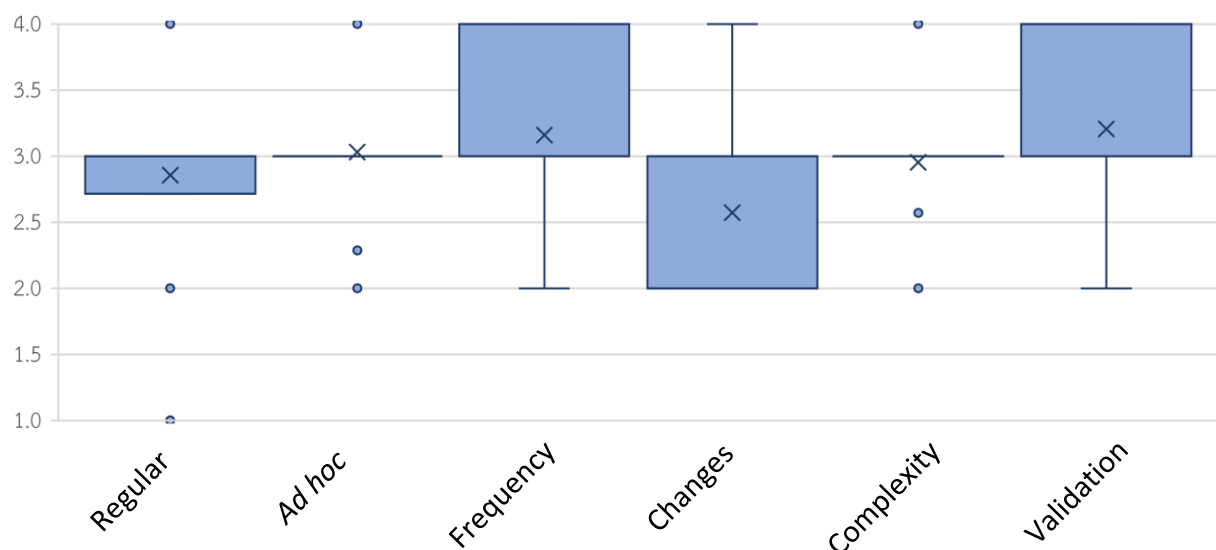
3. Key findings

3.1 Irritation costs

Firstly, participating banks provide subjective assessments on how painful the reporting process is. Such irritation burdens (or hassle costs) are often accounted for, but not monetized, in the measurement of administrative burdens (EC, 2019). Overall, regulatory reporting is generally deemed a 'large' burden, as shown by the average score around three (on a scale of one to four) in Figure 2.

According to the survey, participants as a whole view regular returns and *ad hoc* request as almost equally burdensome. In addition, the responses do not show any statistically significant differences between large and small banks. A similar remark can be made regarding costs due to regulatory changes and complexity of regulatory returns. The average costs with respect to reporting frequency and pre-submission validation are slightly higher than other categories though. The former is due largely to financial market items – most of which are reported on a daily basis – while the latter to bank balance sheet items which, as subsequent interviews revealed, involve numerous manual works.

Figure 2: Irritation costs of regulatory reporting



This figure shows assessments with respect to different aspects of regulatory reporting. The subjectively felt burden is rated on a scale of 1 to 4 – from ‘small’, ‘medium’, ‘large’, and ‘very large’. The mean is marked by a cross.

The discussions with bank staff also help identify key pain points in the reporting process as outlined below:

- Lack of a single gateway, resulting in more time and efforts spent on liaising and communicating with BOT staff;
- Inefficient data governance, creating unnecessary duplication of requests/requirements; and
- Some concerns about the RDT project which requires a large sum of capital expenditure.

These comments were particularly helpful for designing appropriate remedial actions (to be elaborated in Section 4).

3.2 Total reporting costs

Although the irritation costs do provide interesting initial assessments of regulatory burden, as it turns out, they are only weakly correlated with the total monetized costs (a correlation of 45% and a rank correlation of 13%). We therefore turn our attention to a more objective assessment of regulatory burden. Table 1 shows the summary of results.

The average on-going costs per financial institution amount to around 30 million baht per year (the mean at 37.8 and the median at 29.3), i.e. just below 1 million US dollars. The cost distribution is positively skewed, resulting in the larger mean. This is due mainly to large banks' reporting costs which, on average, double those of small banks. Nevertheless, large banks incur markedly lower costs as a proportion of total operating expenses. The average difference of about 50 percentage points is statistically significant at 5% level. Such findings come as no surprise since large banks tend to be subject to more onerous reporting requirements, but they also experience economies of scale which bring down a marginal burden.

Table 1: Total costs of BOT's regulatory reporting, by size of commercial banks

	HR Costs		IT Costs		Total Costs (THB mn)	As % of Opex	
	FTEs	THB mn	#System	THB mn		Total Opex	Employee & Equipment
Whole sample (N=9)							
Mean	56.9	25.9	20.8	11.8	37.8	0.31%	0.50%
Median	35.0	25.0	13.0	10.0	29.3	0.12%	0.18%
Min	13.0	12.3	4.0	0.3	16.3	0.05%	0.07%
Max	216.6	45.0	46.0	33.0	78.0	1.21%	1.72%
Large banks (N=5)							
Mean	82.5	30.7	29.8	18.9	49.6	0.08%	0.12%
Median	51.0	34.8	30.0	15.0	49.8	0.07%	0.11%
Small banks (N=4)							
Mean	24.9	20.0	9.5	3.0	22.9	0.59%	0.97%
Median	27.3	19.8	10.5	1.6	23.1	0.48%	0.88%
<i>Diff</i>		10.7		15.9*	26.7*	-0.51%*	-0.85%*

*This table provides summary statistics for regulatory reporting costs, both in absolute terms (Thai baht, million) and as proportions of the banks' operating expenses (Opex) which are based on 2019 financial statements. The bottom row shows differences in means (Diff) between sub-samples where * denotes statistical significance at 5% level (one-tailed).*

In terms of cost items, staff expenses account for well above two-thirds of total reporting costs. The responses, moreover, do not show any statistically significant differences between HR costs of large and small banks. These findings suggest a rather labor-intensive reporting process in Thailand; the remark was also evident in follow-up discussions with bank staff. This is a stark contrast to the European case (EC, 2019) where IT-related costs are the most important item for banks and financial conglomerates. A plausible explanation to such a difference in cost composition is the lower labour productivity in Thailand. According to the International Labour Organization's (ILO) estimate (output per worker) as of November 2020, the figure for Thailand is about a third of the European Union's.

3.3 Enhancement costs

In light of the increasing demands for *ad hoc* requests as a result of the pandemic, banks were also asked to assess additional costs due to (i) changes in templates; and (ii) new data requests. While most managed to supply a range estimate of enhancement costs, the responses varied greatly across banks, and hence should be interpreted with a higher degree of uncertainty compared with the figures reported in the previous section. It is worth noting that while HR expenses are the main proportion of the total on-going reporting cost, enhancement costs appear to be driven largely by IT costs.

The average lower bound comes in at eight hundred thousand baht per request, or just below 3% of total reporting costs. The average upper bound, on the contrary, is a rather substantial five million baht per request, i.e. almost 9% of total costs. See Table 2 below. The main determinant of enhancement costs is the degree of alteration to the IT systems necessary to meet such requirements. If the new returns only require minor alterations e.g. creating new lines of codes, the enhancement costs will be around the lower bound. On the other hand, if major IT investment or updating is needed, then the enhancement costs will edge toward the upper bound.

Bank staff also raised concerns about regulatory returns which were not well thought out or poorly coordinated as they could result in unnecessary repetition or recurring alterations to the requirements. This issue deals largely with the bank of Thailand's data governance which will be key to remedial actions (to be addressed in Section 4).

Table 2: Enhancement costs of BOT’s regulatory reporting, per request

	THB mn		As % of Total Reporting Costs	
	Lower	Upper	Lower	Upper
	Whole sample (N=8)			
Mean	0.8	4.8	2.61%	8.87%
Median	0.6	1.95	1.21%	7.11%
Min	0.03	0.2	0.05%	1.23%
Max	2.2	15	7.51%	19.23%

This table provides summary statistics for enhancement costs, both in absolute terms (Thai baht, million), and as proportions of the banks’ total reporting costs.

3.4 Extrapolation

Using the mean costs in extrapolation simply on a pro rata basis, the total reporting cost for the banking sector in Thailand amount to 1.1 billion baht (about 35.5 million US dollars) per year. Moreover, the regulatory returns in relation to the three main relief measures during 2020 – all of which require some degree of alterations to the banks’ IT systems – would have added at least an extra 7.83% to the total cost. All in all, the total reporting cost probably stood at 1.2 billion baht or about 0.8% of the banking system’s recorded net profit (146.2 billion baht).

3.5 Benchmarking

Finally, the findings can be compared with international experience. The EC’s report (2019) on costs of EU financial legislation appears to be the single most comprehensive reference available. Some of their findings are reproduced in Table 3 below for benchmarking purposes.

The EU mean reporting cost is estimated at 6.37 million euros (235 million baht) per year, which is much higher than our finding in Thailand (37.8 million baht). On the contrary, the EU median is a mere 0.18 million euros (6.7 million baht) which is markedly lower than our finding (29.3 million baht).

Table 3: Supervisory reporting costs of banks & financial conglomerates

	EUR mn	As % of Opex
Sample (N = 52)		
Mean	6.37	0.49%
Median	0.18	0.27%

Notes: 69% of respondents are classified as ‘large enterprises’ (>=250 employees).

Source: EC (2019)

Such puzzling results could owe to sampling differences – all banks in our sample may be classified as ‘large enterprises’ in the EC’s report whose respondents comprise a sizable number of very small enterprises. Since costs tend to rise with size of enterprises (or scale of operations to be more precise) the comparison might be biased. We therefore resort to the unit-free measure, the Cost-to-Opex ratio, for comparative purpose. Thailand’s reporting burden now looks in line with – if not less than – the EU experience where both the mean ratios are of a close order of magnitude (0.31% vs 0.49%) in a sense that any difference is unlikely to be statistically significant. The same is true for the median ratios (0.12% vs 0.27%).

4. Policy recommendations

Is regulatory reporting a burden to Thailand’s banking sector? Definitely, yes. Our study found that the industry’s total cost was around 1 billion baht per year (or around 30 million baht for each commercial bank). But is the cost excessive? Probably not. The overall performance is in fact broadly in line with EU. Additionally, in 2020, the cost added up to less than one percent of the industry’s net profit.

While our estimates may be subject to error, they do suggest a scope for improvement in the reporting process. The BOT should aim to reduce regulatory reporting costs of the overall banking industry, and in particular those of smaller banks as measured by the Cost-to-Opex ratio. The EBA has announced a target of 10-20% cost reduction for smaller institutions, and we cannot see why the Bank of Thailand cannot subscribe to the similar aspiration given the 50-percentage point Large-Small gap reported earlier.

We believe that a reasonable degree of standardization is necessary. For instance, a well-documented data dictionary should help reduce banks' (subjective) interpretations of the requests as well as shorten their time spent on reviewing and cross-checking the returns before submission. On the other hand, a certain degree of customization may be advisable. The Bank of Thailand is currently pioneering a data acquisition system which would allow data of each bank to be retrieved as they are stored i.e. in their native form. The new system might incur a significant sum of IT alteration costs, but is expected to help reduce reporting costs in the longer term.

At the same time, the central bank's data governance could be strengthened by taking the following steps:

- Establishing a single gateway via real-time data registration and authorization;
- Reinforcing the statistical code of practice, especially the 'least cost principle'¹, by building awareness among relevant staff; and
- Instituting regular reviews to ensure both efficiency and effectiveness of regulatory reporting.

The single gateway should help reduce unnecessary repetition of requests from the central bank side, while lowering other irritation costs of commercial banks. More importantly, the Bank of Thailand should reinforce the 'least cost principle' when initiating new regulatory returns. Our finding indicates that each could increase the reporting cost by almost 3%, and hence the number of new requests should be kept to the minimum. At the very least, a cost-benefit analysis should be conducted in order to justify a new request.

Finally, it is imperative that a similar study on costs of regulatory reporting be conducted periodically as an important diagnostic tool to help keep regulatory burden in check. An annual interim report can focus on any incremental costs due to the introduction or alteration of returns, while a full survey may be conducted every 3-5 years to monitor potential "structural changes" in the reporting burden.

¹ In terms of respondent burden, the Bank of Thailand will keep provider load and intrusion to a minimum.
<https://www.bot.or.th/Thai/Statistics/Documents/Codeofpractice.pdf>

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Appendix A – Questionnaire



ธนาคารแห่งประเทศไทย

Translated from the original version in Thai

Bank of Thailand's Regulatory Reporting Cost Survey

The responses will be used in a cost-benefit analysis, and as an input for improving the BOT's reporting process so as to reduce reporting burden of commercial banks.

Please answer all questions; information collected will be kept strictly confidential.

Name of Bank

Contact person

Tel

Email

Date

Part 1 Pain points

How much are the following regulatory reporting requirements a burden to you?

	Small	Medium	Large	Very large
1.1 Volume of regular returns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.2 Volume of <i>ad hoc</i> returns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.3 Reporting frequency e.g. daily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.4 Changes in requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.5 Complexity of returns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.6 Pre-submission validation of returns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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ธนาคารแห่งประเทศไทย

Part 2 Cost estimation

2.1 Resources required for BOT reporting:

- (1) Total number of staff involved persons
- (2) Average time spent hr/person/day
- (3) Total staff expense baht/year
- (4) Total number of IT systems involved systems
- (5) Total maintenance cost baht/year

2.2 Incremental costs (bath/dataset) due to (i) changes in returns and (ii) new dataset requests:

(i) Changes in returns	a. Aggregate data	b. Transactional data
(1) HR cost	<input type="text"/>	<input type="text"/>
(2) IT cost	<input type="text"/>	<input type="text"/>
(ii) New dataset requests	a. Aggregate data	b. Transactional data
(1) HR cost	<input type="text"/>	<input type="text"/>
(2) IT cost	<input type="text"/>	<input type="text"/>

Part 3 Additional feedback

Contact persons: Rachchabhorn (023567761) Warapong (023567681)

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