



WIPO-ASEAN Regional Project IP Valuation



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ASEAN IP Valuation Report

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Malaysia Report

Indonesia Report

Thailand Report

Philippines Report

Vietnam Report

Singapore Report

Myanmar Report

Laos Report

Cambodia Report

(Brunei Report not available at time of writing this Report)

Executive Summary

There is growing interest in IP assets globally and across ASEAN. Governments are more interested in now reviewing the results and economic potential of IP assets coming from national research and development (“**R&D**”) spend.

As part of the WIPO’s efforts to support ASEAN in strengthening its regional innovation system and enhance recognition of the value of IP as a financial asset as well as create a more transparent IP market, this project was launched to investigate IP valuation (“**IPV**”) in context in ASEAN.

Firstly, as understanding the role of IPV cuts across disciplines of law, finance accounting and management, a multidisciplinary team was assembled with strong national representation across the ten ASEAN countries. Secondly, a framework was designed, and a sectoral approach was adopted to address the important consideration that IPV is context and purpose driven.

Accordingly, the survey would be conducted amongst four groups:

- Practitioners (service providers – IP valuers, accountants, IP lawyers, IP strategists);
- Enterprises (multinational corporations (“**MNCs**”), small and medium enterprises (“**SMEs**”), Start-Ups);
- Financial Communities (broadly covering angel investors, private equity (“**PE**”) and venture capital (“**VC**”) funds, banks); and
- Academia / Publicly Funded Research Institutes.

There were 343 participants across ASEAN¹. Total number of participants / respondents in each category:

- Practitioners – 114;
- Enterprises – 58;
- Financial Communities – 36; and
- Academia / Government Institutions – 135.

¹ Some declined to respond to parts where they were unable to answer.

Recognising that it is the underlying IP rights associated with any technology, brand or innovation within a company or organisation that allow for the exclusivity and ownership of the same and it is that which provides the return on investment, the work of the experts involved investigating the foundational IP most used in an IPV exercise in their countries.

The survey across the four different sectors endeavoured to broaden the scope of this question to not only include traditional categories of IP (patents, trademarks, designs and copyright) but also intangibles that have increasingly gained importance such as know-how, software and data (the latter two also known as computerised information).

The results underscored the co-relation and need for an efficient IP system to support IPV work – as has been seen in the reports for the less developed nations in ASEAN, a weaker and/or relatively new IP regime also meant that there is little appreciation of the value of IP and the need for it. Correspondingly, there is little or no commercialisation of IP or use for IP for raising finance, for which IPV work necessarily follows.

Interestingly, practitioners and enterprises across ASEAN are fairly closely aligned.

Trademarks showed highest scores across Indonesia, Vietnam, Malaysia, Singapore, Thailand, Philippines and Myanmar with patents a close second.

However, for the Academic sector, there was a marked preference for patents with know-how and trade secrets a close second. Indonesia's impressive engagement of 80 participants in the survey showed a clear lead with 87% ranking patents as most important, consistent with results in Thailand, Philippines and Malaysia.

Results from the Financial sector came mainly from Indonesia, Malaysia and Thailand. There appears a spread of emphasis across the different IP categories for the financial community. This diffused emphasis is likely due to the fact that investors tend to invest in the enterprise itself as opposed to the IP asset *per se*, although the IP is evaluated as part of the value of the company. This appears to co-relate with the results that VCs, banks, PE funds do not conduct IPV themselves but tend to rely on the target /enterprise to pay for and provide the IPV report to support its funding request.

As IPV is driven by purpose, the results on who the practitioners serve is instructive.

In Indonesia and Singapore, the practitioners largely serve the MNCs and large companies for IPV whilst in Malaysia, Thailand, Vietnam and Myanmar, IPV is mainly done for SMEs. There is a fair bit of work being carried out for Start-Ups as well, in particular, in Vietnam and Indonesia. In Philippines, a lot of IPV work is being done for government agencies, the universities and research institute. There is the increasing importance on the focus to support SMEs in obtaining external financing ; here this sector needs to be served especially high growth SMEs that may be asset light in terms of tangible property but have significant intangible assets and IP that help it compete and differentiate itself.

In the next segment we asked the question on what they used IPV for and the results were consistently top for Acquisition/Sale of IP (price allocation), M&A, Licensing or Litigation. Here there were also references to equity financing, tax, financial reporting and transfer pricing. There was little or limited use for debt financing. However, of note was the responses (or lack of it) from the financial community many of whom responded that there appeared little need or they saw no benefit from IPV reports. There appears a serious lack of understanding or information asymmetry on this new class of economic asset called IP. In particular, banks which in reality are the main source of funding for SMEs across ASEAN have an aversion to embracing alternative financing such as IP asset backed loans. There is a clear need to increase both awareness of these actors and their confidence in the valuations themselves, and their limitations.

In this report, we investigated all methodological aspects of IPV, from standards used, qualitative assessment of the IPs at stake, to thorough analysis of the risks and uncertainties related to the commercial exploitation of the latter, and the very quantitative methods themselves used to determine reasonable and auditable values for the assets.

All the panel of methods and tools are used across the countries and types of valuers; nevertheless, the practices appear strongly dependent on the valuers themselves, their competencies and their background.

Some of the most critical assumptions (e.g., discount rates for discounted cash flow calculations) rely on risks analyses which are performed in various modes, not necessarily adapted to the contexts, except when compulsory for reporting or compliance reasons. As elsewhere, there is a general need to deploy best practices to bridge risk analysis/assessment and discount rates.

As the value of an IP asset is an opinion at a particular point in time, it is crucial for all actors involved in such valuations to understand the underlying assumptions made and their quantitative implications. Here again, there appear to be large differences between the approaches used, not only for different purposes (each of them implying thorough investigations but also judgement by the valuers), which is normal, but also between the assessors themselves.

The barriers to requesting for an IPV report are many. But a few stand out – lack of demand resulting in a vicious circle of few offering professional IPV support (or having the capability / training to do so), high transaction costs (whether just for the IPV itself or attempting to seek IP financing using its IPV) and lack of credible and reliable data for input regardless of the valuation methodology chosen.

Our conclusions in brief:

- We see a strong co-relation between maturity of the IP system and local use, with commercialisation and need or use of IPV and accordingly it is important that any solution has to be tiered and appropriate to the national level of use of IP.
- We also recognise use of IPV is not uniform although some consistency in:
 - categories of importance of IP are trademarks, patents, data, and software so this should receive greater emphasis in promotion as the subject matter in IPV and more input parameters shared here;
 - greater use by enterprises and academia served by practitioners in particular SMEs and Start-Ups. This shows where the need also lies; and
 - weak or little understanding or use by financial communities across ASEAN Member States (“AMS”) – This warrants possible policy intervention to develop and improve understanding and use of IP and IPV within the financial communities across AMS as they are gatekeepers of finance for the enterprises in particular.

Some recommendations:

- As reliability of data is key to credible IPV's support, an IP disclosure framework for information gathering. There are some models to consider.
- Public and private initiative may be necessary to encourage disclosure and incentivise sharing of data.
- There is adequate training in marketplace on IP as subject matter and need for IP protection and also now on IPV *per se*, however, need stronger emphasis on education that *bridges business management, IP and IPV* as a tool to drive demand:
 - through designated programs (whether certified or not); and
 - customised training for enterprises, for example, SMEs more towards strategic decision-making and debt financing whilst Start-Ups greater emphasises raising equity finance from IP.
- Strong local government support required, in particular, to drive the initiative with *financial communities* and to actively engage them due to inertia from this sector.
- Craft policy recommendations based on analysis of the national data of that ASEAN member state from this project.

- Provision of financial resources and grants / funds to conduct IPV that is recognised nationally to catalyse IPV proliferation with a view towards an ASEAN wide framework where IPV is regionally accepted whenever commonly agreed standards have been applied.
- Establish a working group on IPV within ASEAN, including experts from other zones, to continue consensus building, sharing of best practices, and working towards the IPV framework with specific timelines for completion.

The proposed IP toolkit to help move us towards our goals:

- To develop the toolkit as a foundational resource – acceptable criteria / checklists for IPV, methodology, including their limitations, and scoring for different categories of IP.
- Allow for commonly accepted IPV reports to be relied upon for co-operation and partnership within nations and with each other across ASEAN for regional impact / interoperability – avoid duplication of effort.
- Propose “common database” of accepted standards and practices that can inform and direct IPV across ASEAN for greater credibility and reliance of these IPVs conducted – (shared capabilities).
- WIPO customised training workshops directed as these standards / practices for uniform deployment, exchange of information and sharing of benefits / case studies.
- Development of a roadmap for IPV with a framework linked with appropriate level of national IP development and use in country including shift from public driven to private drive IPV use.

Chapter 1 : Introduction

1.1 – Introduction

- 1.1.1 It is critical to understand the economic benefit of IP, and a key instrument to determine this is by an IPV exercise. IP assets exist by virtue of protection afforded by law. The fundamental basis of why an IP asset has value is its unique attributes of firstly giving legal rights and title to the IP owner and following that, the exclusivity and the right to exclude others or allow its use (for example in a licence) in exchange for gain (whatever form this may take, whether monetary / financial or otherwise, for example allowing opportunities for cross license or access to third party proprietary IP). This is because IP can be a defensive or offensive tool. This benefit can be quantified whether as the direct or immediate benefit to its owner or the potential future economic benefit.
- 1.1.2 The categories of IP are a complex subject in itself as it is not a single law but specific and defined aspects covering intellectual creation and activities; from patents to protect innovation and technology, to designs to cover look and feel or shape of products developed at significant cost, copyright for publication, software, images or artistic works; or trademarks for protection of brand identity and trade names, to name a few. The beauty and strength but also the challenge presented in valuing IP is because it is by definition unique. This is compounded by the fact that IP and intangible assets (“IA”) value depend on context of use. There is an interaction between tangible and financial assets with IP in context. IP is developed and protected at great costs – in time, effort and money. It is always in the interest of the owner, the organisation, its country and on a larger scale, for a region, to ensure the full value of IP is extracted. This is why IP is now seen as an economic driver and engine for growth around the world. The role of IP has changed from being seen as a purely legal matter to a financial asset.
- 1.1.3 The full subject matter of IP monetisation and commercialisation is outside the purview of this report. However, one of the obstacles to the release of the benefit and value of IP is the lack of use of IPV as a tool towards this end. The importance of IPV is that it is a means to communicate the value of IP to the marketplace.

1.2 – The Objectives

- 1.2.1 In this project, WIPO aims to:
- a. strengthen the ASEAN regional innovation ecosystem;
 - b. implement projects towards ASEAN IPR Action Plan 2016 to 2025, in particular, deliverable 17.2 on best practices on IPV;

- c. enhance recognition of the value of IP as a financial asset in the business community; and
- d. create more transparent IP market relations and environment of trust in IP transactions.

All this conducted with the support of Japan Industrial Property Global Funds in Trust (“FIT”).

- 1.2.2 This project will endeavour to set out regionally agreed leading principles and IPV, IP practices, and summarise commonly acceptable regional IPV as practised across ASEAN for more formalised adaptation and inclusion in the regional IP strategy of the AMS. This is to allow WIPO to contribute to a customised capacity building program for IPV for the innovation stakeholders and create a new culture in tech transfer and IP commercialisation, harnessing a more transparent and trusted IPV practice.

1.3 – Methodology Applied

- 1.3.1 The lead expert facilitated a coordinated contribution from regional experts to:

- a. provide substantive input on IPV as practiced in the ASEAN countries;
- b. agree on a framework for information gathering;
- c. conduct and complete surveys / interviews for localised findings with the aim of data driven conclusions and recommendations across four key sectors amongst the users and stakeholders: practitioners, enterprises, financial communities and academia;
- d. provide customised and specific forms as a guide or template to assist the regional experts so as to have a structure to their data collection. The templates were not intended to be comprehensive nor rigid but a means to categorise facts obtained;
- e. assess factors needed for adaptation and inclusion in IPV practices across AMS; and
- f. assess tools required towards greater IPV capacity development and implementation.

- 1.3.2 Surveys were conducted over a period from February to June 2023 by regional experts:

- a. Budi Pinsetio Martokoesoemo for Indonesia;
- b. Krissada Jutimongkonkul for Thailand;

- c. Editha Hechanova for Philippines and Laos;
- d. Mohamed Ikhwan bin Shahdzul Bakri for Malaysia and Myanmar;
- e. Andre Toh for Singapore and Brunei; and
- f. Franz Degenhardt for Vietnam and Cambodia.

Brunei and Cambodia reports were not available at the time of writing this report.

1.3.3 There were 343 participants across ASEAN². Total number of participants / respondents in each category:

- a. Practitioners – 114;
- b. Enterprises – 58;
- c. Financial Communities – 36; and
- d. Academia / Government Institutions – 135.

1.3.4 Interview methods included face to face sessions, online interviews, round table discussions and sending out of survey forms to targeted groups of qualified participants. Data was obtained respecting the privacy and confidentiality of respondents who chose not to be identified using Chatham house rules or anonymised inputs. There were those who agreed to be identified for purposes of context and we thank and appreciate them for their contribution. The details are found in the Regional Reports attached herein as Appendix II.

1.4 – Challenges

1.4.1 The AMS, whilst highly committed to develop harmonised IPR management practices, are at varying stages and levels of recognising, protecting, deploying, and monetising IP, foundational to any IPV exercise.

1.4.2 The state of IP development, systems and registration are advanced in Malaysia, Indonesia, Singapore, Philippines and Vietnam. However, for Laos, for example, the governing law on intellectual property is fairly new, being amended and improved as recently as 2017 (The Lao New IP Law No. 38 / NA of 2017) which is based on WIPO model law under the Trade Related Aspects of IP Rights Agreement (TRIPs). In Myanmar, whilst the trademark law, patent law, industrial design law, and copyright

² Some declined to respond to parts where they were unable to answer.

law was passed in 2019, trademark law was entered into force on 1st April 2023 and started registration system for trademark application, and other IP Laws such as patent, industrial design and copyright laws are in the implementation to enter into force. This means that Myanmar has currently no protection presently for patentable inventions. It is therefore important to understand the responses provided in the surveys within this context.

- 1.4.3 Secondly, the process of collating data is time intensive and requires explaining and/or demonstrating IPV as used in the marketplace. In the several meetings held amongst the experts in the conduct of this project, one very clear problem was the lack of understanding of the survey by the respondents, and the idea of IPV itself such that a key role played by the regional experts was to educate, clarify, and explain, resulting in the best results coming from the experts who engaged actively with the interviewee / respondents.
- 1.4.4 Further, identifying and obtaining consent of target participants require a qualification process, i.e., finding candidates who have been involved or are aware of IPV so that it provides a realistic and practical perspective of the situation on the ground. All this requires hard work and patience. Accordingly, the effort in identifying who to interview, and obtaining the relevant information, had varied results dependent on the evaluators used in the exercise.
- 1.4.5 Finally, discussion of financially driven transactions, whether IP related or not, are often sensitive and confidential to parties involved. Also, when dealing with various valuation methodologies, certain input such as current or prospective financial information, anticipated revenues, working capital, growth rates, pricing paid in transactions and circumstances price was paid are hard to obtain and understand. Yet the respondents have to have some appreciation of this in order to provide credible answers to somewhat technical questions, necessary in an IPV survey.

Chapter 2 : Review of Category of IP Valued

2.1 – Overview

- 2.1.1 One of the preliminary questions in any IPV exercise is what the type or category of IP asset is being valued. This is important as each type of IP has different characteristics and legal status, term and scope of protection. This is related to the basis of the creation of that IP and its management, in particular, the strategic reason for its protection. For example, a breakthrough technology after significant R&D will prompt the process of filing a patent, require determination of its scope and structure and the consideration of whether a cluster of patents (i.e., a portfolio) should be developed to protect that line of business in its important markets (IP strategy and IP management decisions).
- 2.1.2 When ultimately this attracts interest, the company can look at allowing other companies to use it (here the appropriate IPV to assess licensing and royalty rates) or consider selling it (IPV to assess sale for reasonable and fair value for buyer or seller in possible acquisition exercise; transfer pricing issues may also be of concern).
- 2.1.3 In this project, we asked the respondents across the four groups to get a sense of what is important to them and what they would value, as this would incur costs and effort on their part. In order to get a perspective across ASEAN, the results of the survey from the ten countries were tabulated so that at a glance it is possible to assess the statistics and discern any national or regional trends.
- 2.1.4 It should be noted that the regional experts presented their results differently. Some calculated based on percentages while others were very granular setting out responses as received, some just reported their conclusions.
- 2.1.5 In order to have a basis of comparison, a ranking system was chosen to identify the top categories by the highest numbers received whether by percentage or by the number of (favourable) responses for that category. The number in red (1, 2, 3) indicate the ranking according to analysis of the country report. If more than one category is given showing equal weightage or they share the same percentages, or there is no weightage indicated by the experts then the two or more categories are given the same ranking or treated as equal.
- 2.1.6 The tables are prepared according to the group interviewed / surveyed to better reflect the findings. Although the numbers interviewed in each country varied, and even the type of entity within that group (e.g., in Philippines, the majority of companies participating were micro enterprises; for academic sector these included largely government research institutes), overall due to the range captured across ASEAN, the results were collectively representative of each group.

2.2 – Practitioners

| TABLE 1 PRACTITIONERS - IP MOST FILED / USED FOR IPV | | | | | | | | | | | |
|--|----------------------|------|-----------|------------|--------------------------|----------|----------|----------|-----------|---------------|---|
| No. | Country | Type | Patents | Trademarks | Know-How | Data | Software | Design | Copyright | Others | Remarks |
| 1 | Indonesia (21/21) | | 3 24% | 1 81% | - 10% | - | 2 62% | - | - | - | |
| 2 | Thailand (11) | | 1 - | 2 - | - - | - - | - - | - - | - - | - - | No percentages given only ranking |
| 3 | Myanmar* (3) | | - - | - - | 1 - | - - | 1 - | - - | - - | - - | Anecdotal - only one practitioner |
| 4 | Vietnam (18/43) | | 3 15% | 1 55% | 4 5% | - - | - - | - - | - - | 2 20% | |
| 5 | Philippines (15) | | 1 (40) | 3 (14) | 2 + Trade Secret (30) | - - | - (5) | - - | - (3) | 1 (43) | () is number of responses, not percentages |
| 6 | Singapore (7) | | 1 (6) | 1 (6) | 2 (3) | - (1) | 2 (3) | - (1) | - (1) | - Tech (1) | |
| 7 | Laos (3) | | - - | - - | - - | - - | - - | - - | - - | - - | |
| 8 | Malaysia (10/11) | | 2 60% | 1 80% | - - | - - | 2 60% | - - | 2 60% | - - | |
| Total 114 () - No. interviewed / surveyed 1 to 4 - (ranking of which is top IP) * It should be noted Myanmar only has a trademark system. There is no patent or other IP registration system yet in force although it is underway. | | | | | | | | | | | |

2.2.1

Table 1

2.2.2 Amongst the practitioners across ASEAN, the type of IP most used for the purpose of IPV analysis is trademarks, with the same ranked highly in Indonesia, Vietnam, Malaysia and Singapore (which had patents tie in first place) (see Table 1 above).

| TABLE 2 ENTERPRISES - IP MOST FILED / USED FOR IPV | | | | | | | | | | | |
|---|--------------------|------|------------|--------------------------|----------|----------|----------|----------|-----------|--|--|
| No. | Country | Type | Patents | Trademarks | Know-How | Data | Software | Design | Copyright | Others | Remarks |
| 1 | Indonesia (4) | | - - | 2 25% | 2 25% | - - | - - | - - | - - | 1 Example given was specific ("Licence") ("Regulatory") 50% | |
| 2 | Thailand (14) | | 2 - | 1 - | 3 - | - - | - - | - - | - - | - - | No percentages given only ranking |
| 3 | Myanmar* (2) | | - - | 1 (Trademarks only) - | - - | - - | - - | - - | - - | - - | |
| 4 | Vietnam (1/5) | | 1 - | 2 - | - - | - - | - - | - - | - - | - - | |
| 5 | Philippines (8) | | 1 (6/8) | 1 (6/8) | - (1) | - (1) | - (3) | - - | - (1) | - (2) | () is number of responses, not percentages |
| 6 | Singapore (16) | | 1 (6) | 1 (6) | 2 (4) | - (1) | 2 (3) | - (1) | - (1) | 3 Tech (2) Brands (1) | |
| 7 | Laos (3) | | - - | - - | - - | - - | - - | - - | - - | - - | Three government agents in charge of trade responded - anecdotal on business in Laos |
| 8 | Malaysia (6) | | 2 67% | 1 100% | 4 33% | 5 17% | 3 50% | - - | 5 17% | - - | |
| Total 58 () - No. interviewed / surveyed 1 to 4 - (ranking of which is top IP) * It should be noted Myanmar only has a trademark system. There is no patent or other IP registration system yet in force although it is underway. | | | | | | | | | | | |

2.2.3

Table 2

2.2.4 Interestingly, the results were consistent with survey results from enterprises which were even stronger in their response with trademarks scoring highest in Thailand,

Philippines, Singapore and Malaysia as well as in Myanmar³; with Indonesia and Vietnam indicating it is second most used (see Table 2 above).

2.2.5 Patents, however, was a close second amongst practitioners and enterprises, with results showing top scores in Singapore, Philippines, Thailand and Malaysia for practitioners which was reflected in corresponding ranking from enterprises, but here Vietnam showed a higher score for patents over trademarks.

2.3 – Financial Communities and Academia

| TABLE 3 FINANCIAL COMMUNITIES - IP MOST FILED / USED FOR IPV | | | | | | | | | | |
|---|------------------------------------|-----------|------------|----------|----------|----------|----------|-----------|-------------|---|
| No. | Type Country | Patents | Trademarks | Know-How | Data | Software | Design | Copyright | Others | Remarks |
| 1 | Indonesia (3) | - | 1 67% | 1 67% | 2 33% | - | - | - | - | |
| 2 | Thailand (6) | 1 100% | - | - | - | - | - | - | 2 1 100% | Assume 100% in both means equal importance |
| 3 | Myanmar (1) | 1 | 1 | - | - | - | - | - | - | |
| 4 | Vietnam (2/10) | - | - | - | - | - | - | - | - | None doing IP valuation |
| 5 | Philippines Anecdotal (2 + 1) | - | - | - | - | - | - | - | - | No specific response; appears tech driven decisions - (could be patent, software or copyright as term used "active IPR" which is not defined) |
| 6 | Singapore (9) | - | - | - | - | - | - | - | - | Conclusion: This sector "Do not value IP". No findings reported. |
| 7 | Laos (government response only) | - | - | - | - | - | - | - | - | DDG DiP indicated plans but no current use |
| 8 | Malaysia (4) | 1 50% | 1 50% | - | - | 2 25% | 1 50% | - | - | |
| Total 36 | | | | | | | | | | |
| () - No. interviewed / surveyed 1 to 4 - (ranking of which is top IP) | | | | | | | | | | |
| (How do the financial sectors across the countries measure up?) | | | | | | | | | | |

2.3.1

Table 3

³ As Myanmar does not have a patent system yet in place, it is not surprising only trademark feature in results.

| TABLE 4 ACADEMIA - IP MOST FILED / USED FOR IPV | | | | | | | | | | | |
|--|--------------------------|------|----------------------------------|-------------|------------------|------------|------------------|---------|--|-------------|--|
| No. | Country | Type | Patents | Trademarks | Know-How | Data | Software | Design | Copyright | Others | Remarks |
| 1 | Indonesia *(80) | | 1 87% | 4 15% | - 2% | 2 50% | 3 33% | - 7% | - 5% | - | Outstanding participation |
| 2 | Thailand (5) | | 1 40% to 80% Average 55% ? | 4 5% | 2 Average 30% | - | 3 Average 15% | - | 5 10% book? right? Copyright? | - | |
| 3 | Myanmar (5/6) TISC | | - | - | - | - | - | - | - | - | No patent protection in Myanmar to date - None filed overseas by respondent |
| 4 | Vietnam *(6/6) | | - | - | - | - | - | - | - | - | No IP valuation conducted |
| 5 | Philippines (11) | | 1 (9/11) | 3 (4/11) | - (2/11) | - | - (2/11) | - | - | 2 (7/11) | |
| 6 | Singapore (5) ? | | - | - | - | - | - | - | - | - | Interviews appear to indicate 80% do IP valuation but no analysis reported |
| 7 | Laos (2) | | - | - | - | - | - | - | - | - | "Law too new" |
| 8 | Malaysia (20) | | 1 71.43% | 2 28.57% | 2 28.57% | 3 14.3% | 2 28.57% | - | - | - | Only 7 out of 20 do IP valuation - Responses are collated from those who did IPV |

Total 135
 * No. of response / no. of forms sent
 () - No. interviewed / surveyed
 1 to 4 - (ranking of which is top IP)

2.3.2

Table 4

2.3.3 In Indonesia, data is also relevant and important whilst in Thailand, know-how was the second highest category for the academics.

2.3.4 After patents and trademarks, the category that both practitioners and enterprises referenced was know-how (and trade secrets associated).

2.3.5 This is highlighted in the Philippines, Singapore and Vietnam survey and also Myanmar.

2.3.6 Finally, although software is not a category of IP *per se* (as it may be protected by patents or copyright), it is described as an “intangible asset” that practitioners, enterprises and academics include in the IPV as seen in results from Indonesia, Myanmar, Philippines, Singapore and Malaysia (*see Tables 1, 2 and 4 above*).

2.3.7 Results from the financial sector was the patchiest (*see Table 3 above*). The three country reports where there were findings from the survey were Indonesia, Malaysia and Thailand. These reports indicate that their interviewees carry out or look at valuation of:

- patents (Malaysia and Thailand);
- trademarks (Indonesia and Malaysia);
- know-how (Indonesia);
- design (Malaysia);

- e. software (Malaysia); and
- f. data (Indonesia).

2.3.8 In Singapore, it was reported that although valuation reports are used, all IPV, if at all, is outsourced by its financial community and/or reliant on IPV by the enterprises themselves and therefore the report was “inconclusive”. It is noted the interviewees included VC, banks and PE funds.

2..3.9 In the report summary, the finding was that most of the financial communities interviewed do not value IP. In the interviews with practitioners’ sector (see excel spreadsheet – Singapore Report), two of the valuers appear to have conducted IPV for “investors”. It is not clarified if these are private angel investors or VC / PE funds being served and the Singapore Report does not triangulate this data.

2.3.10 This low level of understanding IPV and its use in funding or financing is a somewhat surprising result given the IP financing scheme (IPFS) piloted from 2014 to 2018 which involved the three major local banks. b From publicly available information, one loan was made against a portfolio of trademarks protection a core brand filed globally and possible one or two loans related to patents and other IP assets during the pilot. IPV reports were prepared and used for each of the successful loans.

2.3.12 In an earlier 2021 WIPO report⁴, it was set out that the purpose of IPV in Singapore had expanded including, inter alia, for IP financing, transfer pricing, licensing, strategic planning and alliances. In fact, as of 2017, as many as 695 IA / IPV s were conducted annually generating between SGD 11.7 million to SGD 165 million in total fees.

2.3.13 For this reason, Singapore is in the process of spearheading work for interoperable IA / IP valuation practices within and across the economies⁵ as well as encouraging listed companies to communicate the value of their IA / IP to the capital market and, in particular, to investors. One named beneficiary of its Intangible Disclosure Evaluation and Audit Scheme⁶ included its report in a quarterly briefing to its *investors*.

2..3.14 It is, however, noted that many banks do not have deep internal IA / IPV capabilities and lack confidence in external IPV, and this is a challenge.

2.3.15 There is significant work ongoing in developing Singapore as a hub for IA / IP transactions, financing and valuation. To facilitate enabling enterprises to successfully

⁴ Unlocking IP-backed Financing – Country Perspectives Singapore’s Journey @ WIPO 2021 pp16

⁵ Ibid. pp. 17 and 19

⁶ SGX and IPOS launched the Intangibles Disclosure Evaluation and Audit Scheme (IDEAS) in 2020. The objective of IDEAS was to raise awareness and encourage companies to undergo IA evaluations and promote a more robust IA disclosure environment.

commercialise their IP, Singapore is developing a credible IA / IPV practice in a whole of government effort and also working closely with the International Valuation Standards Council (IVSC) and WIPO⁷. In addition, agencies such as the Monetary Authority of Singapore (MAS) and the Intellectual Property Office of Singapore (IPOS) are working with an industry working group to develop an Intangibles Disclosure Framework. The intention is to provide a standardised and consistent basis for enterprises to communicate the details of their intangibles, and support better informed assessments of their business and financial prospects.

- 2.3.16 A number of IP backed finance success stories since 2014 reflect the ongoing IPV work in this space. Further, IP is also used in equity financing in Singapore, home to over 150 VCs where it was reported that there was funding of SGD 13.4 billion across 437 deals in the first three quarters of 2019 alone, the period just before the pandemic.
- 2.3.17 The Philippines report on the financial community made reference to anecdotal cases where there appears to be lending or financing against “active IPR” but no category of IP is defined.
- 2.3.18 The results show there is a clear co-relation between the maturity of the national IP regime with the responses received from practitioners and enterprises.
- 2.3.19 The reports from Myanmar and Laos reflect the difficulty in obtaining responses in spite of interest and support of the local IP offices and authorities as the IP regimes are still being put in place.

⁷ Ibid. pp 10, 15 and 16

Chapter 3 : Understanding the Users of IPV

3.1 – Overview

- 3.1.1 In a developing eco system, it is important to understand the players and also who the market needs to serve. The different users have different requirements, but each have a role within the context of the community it is in.
- 3.1.2 For example, MNCs bring important technology and capabilities as well as foreign direct investment. SMEs play a major role in many economies, particularly in developing countries and typically represent 90% of all businesses and more than 50% of employment worldwide based on statistics from the World Bank. SMEs constitute up to 40% of GDP in emerging economies and are therefore a high priority to serve in these countries. Catalysing efficiencies with SMEs in harnessing IP will contribute to the bottom line.
- 3.1.3 In many developing countries, a lot of R&D is carried out in tertiary institutes and government funded research agencies to supplement the lack of such R&D in the private sector, especially its SMEs. How is this R&D translated into IP and how is it valued?
- 3.1.4 R&D activities are also part of the education process which encompasses tech transfer to the marketplace, expanding need for investment decisions. Also, there is financial impact if there is successful commercialisation through licensing the IP, allowing for revenue generation. How can IPV support this?
- 3.1.5 Finally, access to finance is needed and understanding how to unlock the mechanism to release much needed funds from financial institutions and investors to increase lending or capital to companies has increasingly become a priority for ASEAN. Is this sector being served? Is there a gap?
- 3.1.6 To get a pulse of the situation, this part of the survey was addressed to the practitioners who carry out IPV for their clients.

3.2 – Users of IPV

| TABLE 5 IP VALUATION - FOR WHOM | | | | | | | | |
|------------------------------------|-------------------|------------|---|---|-------------------------------|------------------------------------|------------------------------------|---|
| No. | Country | IPV Client | Large Companies | SMEs | Start-ups | Bank / Investor | Governments / Universities | Remarks |
| 1 | Malaysia | | 2 50% | 1 80% | 3 40% | 4 10% | 2 50% | |
| 2 | Indonesia | | 1 67% | 2 38% | 2 38% | 3 24% | - 5% | Insurance - 7 - 10% F&B - 7 - 5% (Sectoral? Type of Industry?) |
| 3 | Thailand | | - - | 1 Largest | 2 Second Largest | - - | - - | |
| 4 | Myanmar | | - - | 1 50% | 1 50% | - - | - - | Only 1 respondent - both group equal |
| 5 | Vietnam | | 2 31% | 1 32% | 1 32% | - - | 3 5% | |
| 6 | Philippines | | 4 Two deals with large companies | 3 Four deals with SMEs | 2 Six deals with start-ups | 5 Bank - None Investor - One | 1 Nine said "yes" in some forms | Insurance - None Rank based on number of practitioners who deal with that group - Many governments / universities require IP valuation |
| 7 | Singapore* (7) | | 1 (7/7) Mainly large companies and SMEs | 2 (5/7) Mainly large companies and SMEs | 3 (2/7) | 3 (* Investor only) (2/7) | - No data | No percentages analysis - "ability to pay" only reference to category "align that banks don't need IPV" - "client" |
| 8 | Laos | | - - | - - | - - | - - | - - | Source for IPV - "IPV is new and not yet started" - DDG DIP MOIC |
| Total in each category | | | 4/8 | 6/8 | 6/8 | 1/8 | 2/8 | |

3.2.1

* MNCs form bulk of IPV work for practitioners.

Table 5

3.2.2 In Malaysia, Thailand, Vietnam and Myanmar, the IPV work carried out by practitioners are mainly for the SMEs. In Singapore, interestingly 100% of the practitioners interviewed did IPV work for MNCs / large companies, with work for SMEs a close second, which is similar to results for Indonesia with large percentage (67%) of IPV work attributed to that done for large companies and MNCs and 38% (second highest percentage) to SMEs tied with Start-Ups (also 38%).

3.2.3 However, overall, the IPV work done for Start-Ups across ASEAN is also high, where for example in Vietnam and Indonesia, the percentage of IPV work done for SMEs and Start-Ups is identical (*see Table 5 above*).

3.2.4 For Myanmar, as the results are primarily the work done by one valuer, it is harder to confirm if it is representative of the country as a whole, but the interviewee indicated 50:50 for work done for SMEs and Start-Ups.

3.2.5 The data from Philippines is interesting as the highest number of practitioners indicate they have done some work for government institutes, universities and research institute (nine practitioners). The second highest number of responses were for Filipino Start-Ups.

- 3.2.6 The assessment of who the practitioners serve is important as there is a difference when assessing the needs of SMEs and Start-Ups and the parameters considered when conducting IPV, compared to the same work for large companies or MNCs; the latter are typically more stable with older brands, proven tech and more robust financial positions whilst Start-Ups in particular are likely to have newer unproven innovations albeit with potential large upside but similarly have higher risks.
- 3.2.7 Also in selection of financing, Start-Ups would prefer equity financing whilst SMEs would prefer debt financing to meet its capital needs for expansion, inventory or maintaining its current operations.
- 3.2.8 All these considerations will impact the IPV work done.

Chapter 4 : Understanding How IPV is Deployed in ASEAN : Purpose of IPV

4.1 – Overview

4.1.1 In any valuation exercise, and more so for IPV, the question of WHY this asset is being valued is extremely relevant, and WHEN (for example, timing of the same, and at what stage – whether mature technology or established brand with clear revenue streams; or nascent innovation with high risk but high value proposition for future gains). All this relate to purpose.

4.1.2 To simplify the analysis, the guided survey gave the main options to select from for each group.

4.2 – Practitioners

| TABLE 6 PRACTITIONERS - PURPOSE OF IP VALUATION | | | | | | | | | | | |
|--|--------------------|-------------|----------------------------------|------------------|-----------------------------|------------------|----------------|---|----------------------------------|-------------------------|---|
| No. | Purpose Country | Liquidation | Financial Reporting | Asset Management | Management Decision Making | Equity Financing | Debt Financing | M&A | Acquisition / Sale of IP Assets | Licensing or Litigation | Remarks |
| 1 | Malaysia | 3 10% | 3 10% | 3 10% | 1 70% | 2 40% | - | 2 40% | 1 70% | 2 40% | |
| 2 | Indonesia | - | - | - | 3 10% | 3 10% | - | 2 (Purchase price allocation?) 62% | 1 67% | 3 10% | Noted: Tax 5% |
| 3 | Thailand | - | - | - | 2 - | 2 - | - | 2 - | 2 - | 1 100% | Analysis anecdotal |
| 4 | Myanmar | - | - | - | - | 1 - | - | 1 (Purchase price allocation?) - | - | - | |
| 5 | Vietnam | - | - | - | 4 9.1% | 5 6.1% | - | 3 (Purchase price allocation?) 21.2% | 1 30.3% (+ 3% assignment?) | 2 24.2% | Start Up 6.1% |
| 6 | Philippines | 5 (1) | 5 Compliance (1) | - | 2 (8) | 5 (4) | 5 (1) | 4 (2) | 3 (5) | 1 (13) | Also mentioned Tax 5 (4) Note: () is number of responses, not percentages |
| 7 | Singapore | - | 2 For regulation purposes (3) | - | 2 Strategic planning (8) | - | - | 2 (3) | 1 (6) | 3 (1) | Tax 2 (3) () appears to be number of responses, not percentages |
| 8 | Laos | - | - | - | - | - | - | - | - | - | No IP valuation |

4.2.1

Table 6

4.2.2 The majority of respondents identified acquisition or sale of IP as the primary purpose of IPV for their clients, in particular, for Malaysia (70%), Indonesia (67%), Vietnam (30.3% which was the highest percentage amongst the respondents) and Singapore (6 out of 7 respondents or 85.7%).

4.2.3 In Thailand acquisition of IP or sale of IP was identified second after litigation / licensing.

- 4.2.4 Overall, however, IPV for M&A was next as identified in the responses from Malaysia and Singapore. For Indonesia, Vietnam and Myanmar, it was described as assisting with “purchase price allocation”.
- 4.2.5 Litigation or licensing was ranked highest for Thailand and Philippines.
- 4.2.6 Malaysia’s results indicate that IPV to facilitate management decision was as important (and frequent) as for acquisition of IP. Thailand, Philippines and Singapore also feature IPV for management and strategic planning.
- 4.2.7 There is also a fair bit of activity for equity financing.
- 4.2.8 Interestingly, only Philippines had a response of use of IPV for debt financing.
- 4.2.9 Overall, Malaysia, Philippines and Singapore had the broadest range of responses on the use of IPV including for tax, compliance and/or financial reporting as well as liquidation.

4.3 – Enterprises

| TABLE 7 ENTERPRISES - PURPOSE OF IP VALUATION | | | | | | | | | | | |
|--|--------------------|-------------|--|---------------------|-----------------------------------|---------------------|-------------------|-----------------------------------|------------------------------------|----------------------------|--|
| No. | Purpose Country | Liquidation | Financial Reporting | Asset Management | Management Decision Making | Equity Financing | Debt Financing | M&A | Acquisition / Sale of IP Assets | Licensing or Litigation | Remarks |
| 1 | Malaysia | - | - | - | 1 | 3 | - | - | 2 | 1 | Mentioned Negotiation 25% Market Strategy 25% Query if this is under management decision |
| 2 | Indonesia | - | - | - | - | - | - | 1 100% | 2 50% | 2 50% | |
| 3 | Thailand | - | 1 (Stock exchange requirement or account purpose) | - | - | - | - | - | 1 | 1 | Ranking provided by Regional Expert - all equal importance |
| 4 | Myanmar | - | - | - | - | - | - | - | 1 | - | Response from sole respondent |
| 5 | Vietnam | - | - | - | - | - | - | 1 Purchase price allocation | - | - | |
| 6 | Philippines | - | - | - | 2 | 2 | 3 | 3 | 2 | 1 | |
| 7 | Singapore | - | 2 (3) | - | 3 Strategic planning (1) | 3 (1) | 1 | 1 2 (3) | 2 (4) | 5/6 1 (2) + (2) | |
| 8 | Laos | - | - | - | - | - | - | - | - | - | No IP valuation conducted to date |

4.3.1

Table 7

- 4.3.2 The results from the surveys clearly show that the two primary purposes companies carry out IPV is for “acquisition or sale of IP” and for “licensing or litigation” as these are ranked highest for Malaysia, Thailand, Philippines, Myanmar and Singapore.

However, enterprises in Indonesia and Vietnam use IPV mainly for M&A and purchase price allocation.

4.3.3 Philippines consistent with responses from practitioners (*compare with Table 6*) show that IPV is used for debt financing, albeit less than for licensing or litigator or the other purposes.

4.4 – Financial Communities

| TABLE 8 FINANCIAL COMMUNITIES - PURPOSE OF IP VALUATION | | | | | | | | | | | |
|--|-------------|-------------|---------------------|------------------|----------------------------|------------------|------------------------------------|--------------------------------|---------------------------------|-------------------------|---|
| No. | Purpose | Liquidation | Financial Reporting | Asset Management | Management Decision Making | Equity Financing | Debt Financing | M&A | Acquisition / Sale of IP Assets | Licensing or Litigation | Remarks |
| | Country | | | | | | | | | | |
| 1 | Malaysia | 3 25% | - | - | 2 50% | 2 50% | 2 50% | 1 75% | 2 50% | 3 25% | |
| 2 | Indonesia | - | - | - | - | 2 33% | 2 33% | - | - | 1 67% | Also state "misc" reasons |
| 3 | Thailand | - | - | - | 1 ^A | 1 ^A | - | - | - | 2 (manage tech license) | help VC to make decision to invest |
| 4 | Myanmar | - | - | - | 1 | 1 | - | 1 Purchase price allocation | - | - | |
| 5 | Vietnam | - | - | - | - | (?) 1 | - | - | - | - | No IP valuation per se - Most are IP valuation plus asset valuation |
| 6 | Philippines | - | - | - | - | 1 (angel fund) | 1 (loans reported from government) | - | - | - | No IP valuation cited references are anecdotal |
| 7 | Singapore | - | - | - | - | - | - | - | - | - | No IP valuation |
| 8 | Laos | - | - | - | - | - | - | - | - | - | No IP valuation |

4.4.1

Table 8

4.4.2 The financial communities use IPV mainly for equity financing in Thailand, Vietnam and Philippines⁸ and it is also often used in Malaysia and Indonesia for this purpose. Myanmar⁹ has indicated this as one of the three purposes the financial communities consider IPV.

4.4.3 For Malaysia, the top purpose is M&A, whilst in Indonesia the top purpose is for licensing and/or litigation.

4.4.4 In Thailand¹⁰, Malaysia and Myanmar, the financial sector use IPV to facilitate management decision making.

4.4.5 In Singapore, the results from this sector were reported as inconclusive as the respondents had indicated they did not do or had no need for IPV.

⁸ For Philippines, the responses recorded were anecdotal rather than from answers to the survey questions.

⁹ Only one interviewee responded. Difficult to conclude it is representative, but it is indicative.

¹⁰ Thailand report stated that IPV was to assist management decision to invest, which is related to IPV for equity financing.

4.5 – Academia

| TABLE 9 ACADEMIA - PURPOSE OF IP VALUATION | | | | | | | | | | | |
|---|--------------------|-------------|------------------------|---------------------|----------------------------------|--------------------------|-------------------|-----|------------------------------------|----------------------------|--|
| No. | Purpose Country | Liquidation | Financial Reporting | Asset Management | Management Decision Making | Equity Financing | Debt Financing | M&A | Acquisition / Sale of IP Assets | Licensing or Litigation | Remarks |
| 1 | Malaysia | - | - | - | - | - | - | - | 1 100% | 2 85.7% | |
| 2 | Indonesia | - | 2 25% | - | 4 (Product comm) 3% | 5 (Financing ?) 2% | - | - | 3 10% | 1 61% | 76% response rate from total interviewed |
| 3 | Thailand | - | - | 2* | 2 | 2 | - | - | - | 1 | * To facilitate decision to file IP or not |
| 4 | Myanmar | - | - | - | - | - | - | - | - | - | IP not used |
| 5 | Vietnam | - | - | - | - | - | - | - | - | - | Academics did not conduct internal or external IP valuation |
| 6 | Philippines | - | - | - | - | - | - | - | 1 3/11 | 1 10/11 | |
| 7 | Singapore | - | - | - | - | - | - | - | - | - | Academics do IP valuation for education training Purpose inconclusive from report |
| 8 | Laos | - | - | - | - | - | - | - | - | - | No IP valuation |

4.5.1

Table 9

4.5.2 The academic sector in Indonesia, Thailand, Philippines, Singapore and Malaysia use IPV mainly for licensing and/or litigation purposes¹¹.

4.5.3 In Malaysia and Indonesia, IPV for acquisition or sale of IP was also important.

4.5.4 In Thailand and Indonesia, IPV is used by this sector for equity financing. It is noted that there is increasing government or university support or grants or funds of various sorts towards university spin offs.

4.5.5 In Thailand, IPV is used by the universities to assist in deciding whether to file or prosecute IP (asset management and management decision making).

¹¹ Given the universities and tertiary institute have a mandate in many ASEAN countries to start looking to commercialise their R&D, it is more likely any response to their question is for licensing rather than litigation as this sector typically do not get involved with infringement suits.

Chapter 5 : Valuation Methodology

5.1 – Due Diligence Methodologies for Qualitative IP Assets Characterisation

5.1.1 Practitioners

| TABLE 14 PRACTITIONERS - QUALITATIVE DUE DILIGENCE | | | | | | | | |
|---|-------------|------------------|------------------|----------------------------------|---------------------|------------------------------|--------|--|
| No. | Country | Database Queries | Indicators-Based | Interviews of Managers / Experts | Functional Analysis | Market-Comparable Parameters | Others | Remarks |
| 1 | Malaysia | 50% | 60% | 90% | 40% | 10% | | A total of eleven (11) practitioners which includes IP Valuers, IP Agents and Accountants provide feedback to the survey forms. |
| 2 | Indonesia | 38% | 33% | 91% | 14% | 5% | | A total of twenty-one (21) practitioners which includes IP Valuers and Accounting firm related advisory arm has provides feedback to the survey forms. 21 out of 21 practitioners surveyed confirmed that they have conducted IP Valuation. |
| 3 | Thailand | ✓ | ✓ | | | | | 11 respondents; Database queries and indicators-based will use PatSnap and the DIP search as basic tools. The Research Fund section uses Actual cost against the research budget to consider as qualitative measurement. It has only one private company that uses indicators based on the internal decision matrix. |
| 4 | Philippines | 53% | 33% | 53% | 33% | | 33% | 15 respondents |
| 5 | Myanmar | | | 100% | | | | Only one answer |
| 6 | Vietnam | 27% | 21% | 26% | 19% | | 5% | 18 answers |
| 7 | Singapore | | | "most common" | | | | 7 answers; "The most common methods to conduct due diligence was to interview manager/experts. However, it is important to note that a wide array of methods was used. Some common, others specific to the practitioner" |
| 8 | Laos | | | | | | | Not applicable |

Table 14

There appears to be a large variability among ASEAN IPV practitioners' methodologies use for qualitative Due Diligence concerning the IP assets at stake.

For example, in Singapore, the width and depth of due diligence aspects seems to strongly depend on the practitioner's abilities.

The most reported items on which practitioners base their assessment of the qualitative features of the IP assets at stake are related to literature review, patent-related indicators (prosecution history, licensing deals, other patents in the technical area) and qualitative market-related assessment of the patents actual monetization or commercial usage possibilities, in the considered macro-environment.

Functional Analysis is reported to be used in Malaysia and the Philippines only.

Among all the interviewees, only Malaysia, Myanmar and Vietnam-based practitioners report to base their assessment on management interviews.

5.1.2 Corporations and Enterprises

| TABLE 15 CORPORATE - QUALITATIVE DUE DILIGENCE | | | | | | | | |
|---|-------------|------------------|------------------|--------------------------------|---------------------|------------------------------|--------|--|
| No. | Country | Database Queries | Indicators-Based | Interviews of Managers/Experts | Functional Analysis | Market-Comparable Parameters | Others | Remarks |
| 1 | Malaysia | 100% | 25% | 50% | 50% | 25% | | A total of six (6) corporations, including private corporations, government link companies and companies limited by guarantee owned by the government, provide feedback to the survey forms. |
| 2 | Indonesia | | | | 50% | | 50% | 4 respondents |
| 3 | Thailand | PatSnap | PatSnap | | | | | Only one multinational does qualitative IP assessment |
| 4 | Philippines | | 38% | 25% | 38% | | | 8 respondents |
| 5 | Myanmar | | ✓ | ✓ | | | | Not applicable - only 2 answers |
| 6 | Vietnam | - | - | - | - | - | - | Not applicable - only one answer |
| 7 | Singapore | ✓ | ✓ | | | ✓ | | "The companies employ various methods for qualitative IP assessment during due diligence, including examining factors such as patent protection, competition, infringement risks, monetization potential, market analysis, political risk, geographical factors, and comparing with comparable brands or assets. They may also use their own databases, indicators, and publicly available data for analysis." |
| 8 | Laos | - | - | - | - | - | - | Not applicable |

Table 15

Generally, Due Diligence practice of corporations and enterprises appear to be similar to the ones of practitioners, with a stronger focus on database queries, management interviews and indicator-based methods.

Some companies use in-house built indicators mainly based on audited financial statements.

It has to be noted that on Thailand, only the single responding multinational enterprise does qualitative IP assessment, using the PatSnap® software for this assessment for IPR (patent search, FTO, etc) and to monitor the portfolio for renewal, and review any potential IP for transfer.

5.1.3 Financial Communities

| TABLE 16 FINANCE - QUALITATIVE DUE DILIGENCE | | | | | | | | |
|---|-------------|------------------|------------------|--------------------------------|---------------------|------------------------------|--------|-------------------------------|
| No. | Country | Database Queries | Indicators-Based | Interviews of Managers/Experts | Functional Analysis | Market-Comparable Parameters | Others | Remarks |
| 1 | Malaysia | | | | | | | 4 respondents |
| 2 | Indonesia | - | - | - | - | - | - | 3 respondents |
| 3 | Thailand | | 17% | 33% | 33% | | | 6 respondents |
| 4 | Philippines | - | - | - | - | - | - | Not Applicable |
| 5 | Myanmar | - | - | - | - | - | - | Not Applicable - 1 respondent |
| 6 | Vietnam | - | - | - | - | - | - | |
| 7 | Singapore | - | - | - | - | - | - | Not applicable? |
| 8 | Laos | - | - | - | - | - | - | |

Table 16

Among the actors of the finance and banking sector, all use IPV for the purpose of Purchase Price Allocation in M&A activities.

Sale and acquisition of IP assets come next, then Equity Financing.

Several actors in Malaysia and Singapore reported management decision making purposes such as strategic planning.

One interviewee in Vietnam clearly stated that banks do not use IP assets to assess the debt capacity of a borrower.

5.1.4 **Academia and Universities**

| TABLE 17 ACADEMIA - QUALITATIVE DUE DILIGENCE | | | | | | | | |
|--|-------------|------------------|------------------|--------------------------------|---------------------|------------------------------|--------|--|
| No. | Country | Database Queries | Indicators-Based | Interviews of Managers/Experts | Functional Analysis | Market-Comparable Parameters | Others | Remarks |
| 1 | Malaysia | | | | | | | None of the 5 academic institutions was found to conduct internal evaluation and economical evaluations of IP. |
| 2 | Indonesia | 46% | 48% | 36% | 45% | | | 80 respondents |
| 3 | Thailand | 40% | 25% | 80% | 60% | | | 5 respondents |
| 4 | Philippines | 45% | 36% | 27% | 36% | | 18% | 11 respondents |
| 5 | Myanmar | - | - | - | - | - | - | |
| 6 | Vietnam | - | - | - | - | - | - | |
| 7 | Singapore | | ✓ | | | ✓ | | Not enough elaborated |
| 8 | Laos | - | - | - | - | - | - | |

Table 17

Academic actors and Universities base their assessments primarily on database (public or proprietary) and indicators (sometimes in-house built), and interviews of managers and mainly in-house technical experts.

5.1.5 **Conclusion**

Due Diligence practices appear to be strongly assessor-dependent. The most reported items are related to literature review, patent-related indicators (prosecution history, licensing deals, other patents in the technical area) and qualitative market-related assessment of the patents actual monetization or commercial usage possibilities, in the considered macro-environment.

Interviews of management are sometimes practiced, and in academia and universities, this is mainly targeted to in-house scientific and technology experts.

Although a lot of documents exist on a worldwide basis, which provide guidelines for IPV Due Diligence, it appears that in ASEAN countries a need for training and harmonization exists.

This does not necessarily imply new standards, but rather the understanding and awareness of methods and checklists / toolboxes for the personnel involved in IPV and their usage.

5.2 – Standards Used for IPV

| TABLE 18 STANDARDS USED | | | | | | |
|----------------------------|-------------|--|---|--|--|---------|
| No. | Country | Practitioners | Corporate | Finance | Academia | Remarks |
| 1 | Malaysia | * MyIPO IP Valuation Model * IVSC e.g., Technical Information Paper (TIP) 3 The Valuation of Intangible Assets * IFRS & Malaysian Financial Reporting Standards (MFRS) * ISO 10668:2010 - Brand valuation Intangible Asset Valuation Guidance Notes Edition 1/2017 by Royal Institution of Surveyors Malaysia (RISM) | * IVSC and IFRS * OECD- Intangibles Transfer Pricing, ISO 26003:2020 * MOSTI Guideline on IP Commercialization (section: Licensing & Assignment) * Industry-based practices | | * APEC IP Valuation Manual * ICC handbook on valuation * Internal Commercialization Guidelines | |
| 2 | Indonesia | * Indonesian Appraisal Professional Society (MAPPI) * Indonesian Appraisal Standards (SPI) Indonesian Financial Services Authority (OJK) * International Valuation Standards (IVS) by International Valuation Standards Council (IVSC) | | | | |
| 3 | Thailand | * Government agencies set standards used for licensing and sale of IP assets by setting standards on a cost-based and trying to promote non-exclusive as a priority. * Equity Financing will use Venture Capital Method to VS Market and Income (DCF) | Only in multinationals and large companies * Licensing: Initial with cost base (as R&D Cost) x Factor (Factor will consider Business strategy, product life cycle, and patent status) or revenue base and target customer (BU) to select * Sale of IP Asset: Initial with cost base (as R&D Cost) x Factor (Factor will consider Business strategy, product life cycle, and patent status) or revenue base and target customer (BU) to select * M&A: Cost base: R&D x Factor (same as above) | | | |
| 4 | Philippines | * IVS * IFRS * Philippine Laws | * Industry-related standards, in-house standards (MIRDC) * For M&A: reporting standards * For Equity financing: SEC guidelines | | * MIRDC - RA 10055 * Tech Trans Act | |
| 5 | Myanmar | | | | | |
| 6 | Vietnam | * Vietnamese Accounting Standards * Vietnamese Valuation Standard No. 13 * IFRS | | | | |
| 7 | Singapore | Uses only if required * Financial reporting (and strategic planning): IFRS, IVS * For tax, 19-B, IRAS, ... * Depending on purpose Fair Value / Market Value | * No standards for some * IVS for some others * M&A/PPA: IFRS * Tax: Fair Value / Market Value | Banks use general finance standards * IFRS for M&A PPA * "VC method" | Fair Value and Market Value | |
| 8 | Laos | | | | | |

Table 18

5.2.1 IP Practitioners

Practitioners generally use standards essentially when they are required by regulations and law. Usage is not homogeneous among ASEAN countries, although several standards are often cited, such as IVS (International Valuation Standards – e.g., Technical Information Paper 3 – The Valuation of Intangible Assets) published by the IVSC (International Valuation Standards Council), IFRS and local Financial Reporting and Accounting Standards, Fair Market Value.

In the Philippines, standards and inputs (such as discount rates) are specified by law, in Malaysia and in Thailand the Government Agencies set standards used for licensing and sale of IP assets by setting standards on a cost-based and trying to promote non-exclusive as a priority.

ISO 10668: 2010 for brand valuation is cited once.

In Malaysia, the Intangible Asset Valuation Guidance Notes Edition 1/2017 by the Royal Institution of Surveyors Malaysia (RISM) are used.

5.2.2 **Corporations and Enterprises**

Corporations and Enterprises generally use the same standards as practitioners.

OECD guidelines for Transfer Pricing are cited for Transfer Pricing-related use of IPV, and ISO 56005:202 is cited once in Malaysia.

Many interviewees also cite industry and in-house standards as a basis for IPV practice. In the Philippines, the SEC guidelines are used for the purpose of Equity Financing.

5.2.3 **Financial Communities**

This group generally uses Finance Standards, essentially FRS for M&A Purchase price Allocation reporting purposes.

5.2.4 **Academia or Universities**

Academia and universities interviewees do not generally report on standards they use, except for some Valuation Manuals or books, and generally Fair Market Value standards.

5.2.5 **Conclusion**

Most of the actors practicing IPV use standards, namely when the purpose is financial reporting or compliance related.

IFRS and local FRS, Accounting Standards and IVSC' International Valuation Standards are widely used.

Some organisations develop their own standards. There seems to be a real need for harmonisation in this field.

5.3 – Quantitative IPV Methods

5.3.1 Practitioners

| TABLE 19 PRACTITIONERS - IPV METHODS | | | | | | | | | | | |
|---|-------------|---------------|-----------------|-------------------------|----------------------------|-----------------|--------------|-------------------------------|---|--------|---|
| No. | Country | Cost Approach | Market Approach | Income - Royalty Relief | Income - Scenario Analysis | Income - Others | Real Options | Combination of two approaches | Combination of more than two approaches | Others | Remarks |
| 1 | Malaysia | 60% | 40% | 70% | | | | | | | A total of eleven (11) practitioners which includes IP Valuers, IP Agents and Accountants provide feedback to the survey forms. |
| 2 | Indonesia | | | 38% | | 29% | ✓ | 28% | | | A total of twenty-one (21) practitioners which includes IP Valuers and Accounting firm related advisory arm has provides feedback to the survey forms. 21 out of 21 practitioners surveyed confirmed that they have conducted IP Valuation. |
| 3 | Thailand | ✓ | | ✓ ✓ | | ✓ | | ✓ ✓ | ✓ ✓ | | 11 respondents |
| 4 | Philippines | 47% | 27% | 40% | 20% | 33% | | 33% | 47% | | 15 respondents |
| 5 | Myanmar | | | | | | | | | | Only one answer |
| 6 | Vietnam | 21% | 17% | 17% | - | 3% | 3% | 7% | 24% | - | 10 answers |
| 7 | Singapore | Ranked 1 | Ranked 3 | Ranked 2 | | | | | | | |
| 8 | Laos | - | - | - | - | - | - | - | - | - | Not applicable |

Table 19

Most of the IP practitioner respondents report the use at least two different approaches, sometimes more than two, e.g., in Thailand and Vietnam.

Among these, the most utilised method is that based on revenues or income, with a strong usage of royalty relief. Costs and/or Market approaches are used in general in combination with the above.

The Real Options method is cited only in Vietnam, and represents a marginal contribution.

5.3.2 Corporations and Enterprises

| TABLE 20 CORPORATE - IPV METHODS | | | | | | | | | | | |
|-------------------------------------|-------------|---------------|-----------------|-------------------------|----------------------------|-----------------|--------------|-------------------------------|---|--------|--|
| No. | Country | Cost Approach | Market Approach | Income - Royalty Relief | Income - Scenario Analysis | Income - Others | Real Options | Combination of two approaches | Combination of more than two approaches | Others | Remarks |
| 1 | Malaysia | 75% | 100% | 50% | | 25% | | 50% | 75% | | A total of six (6) corporations, including private corporations, government link companies and companies limited by guarantee owned by the government, provide feedback to the survey forms. |
| 2 | Indonesia | 26% | | 9% | | | | 55% | | | 4 respondents |
| 3 | Thailand | | ✓ ✓ | | | ✓ | | ✓ | | | |
| 4 | Philippines | 38% | 25% | 38% | 25% | ✓ | ✓ | ✓ | | ✓ | 8 respondents |
| 5 | Myanmar | ✓ | | | | | | | ✓ | | Not applicable - only 2 answers |
| 6 | Vietnam | | | | | | | | ✓ | | Not applicable - only one answer |
| 7 | Singapore | - | - | - | - | - | - | - | - | - | No dedicated IP group |
| 8 | Laos | - | - | - | - | - | - | - | - | - | Not applicable |

Table 20

Corporations and enterprises report to use the three general types of methods, and answers are similar to those of the practitioners.

Combination of multiple methods are generally performed, and from the interviews it appears revenue (royalty relief most often cited) and market approaches are the most used in combination.

No mention of Real Options is made.

On respondent said they only use legal assessments for M&A purposes.

5.3.3 **Financial Communities**

| TABLE 21 FINANCE - IPV METHODS | | | | | | | | | | | |
|-----------------------------------|-------------|---------------|--|-------------------------|----------------------------|-----------------|--------------|-------------------------------|---|--------|-------------------------------|
| No. | Country | Cost Approach | Market Approach | Income - Royalty Relief | Income - Scenario Analysis | Income - Others | Real Options | Combination of two approaches | Combination of more than two approaches | Others | Remarks |
| 1 | Malaysia | | | | | | | | | | 4 respondents |
| 2 | Indonesia | | 67% | 33% | | 67% | | | 67% | | 3 respondents |
| 3 | Thailand | | Compare with the previous case which raised funds, then review the pitch book (also buy information from research company) | | | ✓ ✓ | ✓ ✓ | | | ✓ | 6 respondents |
| 4 | Philippines | ✓ | ✓ | ✓ | | ✓ | | | | | Little information |
| 5 | Myanmar | ✓ | | | | | | | ✓ | | Not Applicable - 1 respondent |
| 6 | Vietnam | - | - | - | - | - | - | - | - | - | |
| 7 | Singapore | | | | | | | | | | Not applicable? |
| 8 | Laos | - | - | - | - | - | - | - | - | - | |

Table 21

Overall, very little information has been reported concerning the IPV methodologies used by the financial community actors.

When done in-house, IPV relies essentially on Income and Market approaches.

Some use combinations (Cost and Income Approaches, Cost and Market Approaches).

The main limitation they observe is the difficulty to find reliable market references, so the Market approach is generally used only for comparisons.

Some actors use their previous deals for comparison, then review the pitch books / business plans to assess the potential values.

5.3.4 Academia and Universities

| TABLE 22 ACADEMIA - IPV METHODS | | | | | | | | | | | |
|------------------------------------|-------------|---------------|-----------------|-------------------------|----------------------------|-----------------|--------------|-------------------------------|---|--------|--|
| No. | Country | Cost Approach | Market Approach | Income - Royalty Relief | Income - Scenario Analysis | Income - Others | Real Options | Combination of two approaches | Combination of more than two approaches | Others | Remarks |
| 1 | Malaysia | 71% | 29% | 29% | | 14% | | 43% | | | None of the 5 academic institutions was found to conduct internal evaluation and economical evaluations of IP. |
| 2 | Indonesia | 28% | | 12% | | | | 33% | 19% | 9% | 80 respondents |
| 3 | Thailand | ✓ | ✓ | ✓ | | ✓ | | ✓ ✓ | ✓ ✓ | | 5 respondents |
| 4 | Philippines | 55% | 36% | | | 9% | 9% | 9% | 45% | | 11 respondents |
| 5 | Myanmar | | | | | | | | | | No IP Valuations done in respondents organizations |
| 6 | Vietnam | | | | | | | | | | |
| 7 | Singapore | | | | | | | | | | Not enough information |
| 8 | Laos | | | | | | | | | | |

Table 22

As far as academic actors and universities are concerned, little information on methods used is available from the interviews.

In Malaysia and the Philippines, cost approaches come first, and in Singapore income approaches are preferred.

Most organisations combine at least two approaches, in the Philippines most actors combine the three types of approaches.

5.3.5 Conclusion

Generally, all standard methods appear to be known and used, and this rather independently of the purpose of the valuation (except when regulations or standards impose one approach or a combination of approaches). Revenue-based and market approaches seem to be the most widely used, whereas Real Options are generally neither cited nor known.

Chapter 6 : Risk and Uncertainty – Discount Rates

6.1 – Practitioners

| TABLE 23 PRACTITIONERS - RISK AND UNCERTAINTY | | | | | | | |
|--|-------------|------|--------------------------------|----------------------|--------------------------|--------|---|
| No. | Country | CAPM | Overall Business Risk Analysis | Market Risk Analysis | Technology Risk Analysis | Others | Remarks |
| 1 | Malaysia | 50% | 60% | 70% | 30% | 30% | A total of eleven (11) practitioners which includes IP Valuers, IP Agents and Accountants provide feedback to the survey forms. |
| 2 | Indonesia | 100% | 60% | 20% | 20% | | A total of twenty-one (21) practitioners which includes IP Valuers and Accounting firm related advisory arm has provides feedback to the survey forms. 21 out of 21 practitioners surveyed confirmed that they have conducted IP Valuation. |
| 3 | Thailand | ✓ | 50% | | | | 11 respondents |
| 4 | Philippines | 36% | 64% | 73% | 55% | 36% | 15 respondents |
| 5 | Myanmar | | | | | | Only one answer |
| 6 | Vietnam | 15% | 33% | 26% | 19% | 7% | 18 answers |
| 7 | Singapore | | | | ✓ ✓ | | 7 answers "Different practitioners value different risk with the technological risk being highlighted the most." |
| 8 | Laos | | | | | | Not applicable |

6.1.1

Table 23

6.1.2 Most of the IP practitioner respondents report that risk is assessed primarily by looking at Market Risk Analysis as well as Overall Business Risk Analysis.

6.1.3 Some combine these two analyses with technology determine a discount rate risk premium. To determine expected returns on equity, CAPM is sometimes but not systematically used.

6.1.4 It is to be noted that in Singapore, the picture seems to be reversed: technology risk assessment is done first from patent history, obsolescence rates, usability of IP, and competition analysis sometimes not even combined with market analysis, considered as the “client side”.

6.1.5 Probability tree analysis is cited once.

6.1.6 Finally, only Vietnam-based practitioners cite Monte-Carlo simulations and combinations of scenarios.

6.2 – Corporations and Enterprises

| TABLE 24 CORPORATE - RISK AND UNCERTAINTY | | | | | | | |
|--|-------------|------|--------------------------------|----------------------|--------------------------|--------|---|
| No. | Country | CAPM | Overall Business Risk Analysis | Market Risk Analysis | Technology Risk Analysis | Others | Remarks |
| 1 | Malaysia | | 50% | 100% | 75% | | A total of six (6) corporations, including private corporations, government link companies and companies limited by guarantee owned by the government, provide feedback to the survey forms. |
| 2 | Indonesia | 100% | | 50% | | 50% | 4 respondents |
| 3 | Thailand | ✓ | | | ✓ | | "-CAPM is mentioned by a multinational enterprise which uses this for acquisition by the VC. -Technology risk analysis is used for the multinational enterprise. They consider the stage of technology (TRL) and refer to the publication on a discount rate." |
| 4 | Philippines | 13% | 25% | 25% | 25% | | 8 respondents |
| 5 | Myanmar | | ✓ | ✓ | | | Not applicable - only 2 answers |
| 6 | Vietnam | ✓ | | | | | Not applicable - only one answer |
| 7 | Singapore | ✓ | ✓ | | | | "The companies employ various methods to assess risks and uncertainties associated with IP acquisition. This includes evaluating the plausibility of technology development, considering regulatory risks in highly regulated industries, using CAPM to determine the cost of equity and discount rates, conducting interviews to identify risks, and conducting overall business risk analyses. The specific approach varies depending on the industry, nature of the acquisition, and expertise of the teams involved." |
| 8 | Laos | | | | | | Not applicable |

6.2.1

Table 24

6.2.2 Corporations and enterprises appear to perform primarily market and overall business risk analysis, combined with technology risk analysis, sometimes based on the TRL (Technology Readiness Level) scale.

6.2.3 CAPM is sometimes used, essentially for M&A Purchase Price allocations and VC valuations.

6.2.4 Interviews of managers is cited only in Singapore.

6.3 – Financial Communities

| TABLE 25 FINANCE - RISK AND UNCERTAINTY | | | | | | | |
|--|-------------|------|--------------------------------|----------------------|--------------------------|--------|----------------------------------|
| No. | Country | CAPM | Overall Business Risk Analysis | Market Risk Analysis | Technology Risk Analysis | Others | Remarks |
| 1 | Malaysia | | | | | | No answers |
| 2 | Indonesia | 33% | 100% | 100% | 33% | 33% | 4 respondents |
| 3 | Thailand | 17% | 100% | | | 50% | 6 respondents |
| 4 | Philippines | | | | | | Little information |
| 5 | Myanmar | | | | | | Not applicable - only 2 answers |
| 6 | Vietnam | | | | | | Not applicable - only one answer |
| 7 | Singapore | | | | | | No dedicated IP group |
| 8 | Laos | | | | | | Not applicable |

6.3.1

Table 25

6.3.2 Overall, very little information has been reported concerning the way the financial community assesses risk in the case of IPV.

6.3.3 In Indonesia, all types of analyses are performed, with an emphasis on market and overall business risk analysis.

6.3.4 The few respondents in Thailand answered that they use overall business risk analysis, and one of them uses CAPM. Banks and VC cited reputational risk.

6.4 – Academia and Universities

| TABLE 26 ACADEMIA - RISK AND UNCERTAINTY | | | | | | | |
|---|-------------|------|--------------------------------|----------------------|--------------------------|--------|--|
| No. | Country | CAPM | Overall Business Risk Analysis | Market Risk Analysis | Technology Risk Analysis | Others | Remarks |
| 1 | Malaysia | 14% | | 43% | 57% | 29% | None of the 5 academic institutions was found to conduct internal evaluation and economical evaluations of IP. |
| 2 | Indonesia | 8% | 51% | 59% | 44% | 41% | 80 respondents |
| 3 | Thailand | ✓ | | 50% | 50% | | 5 respondents |
| 4 | Philippines | 9% | 27% | 64% | 36% | | 11 respondents |
| 5 | Myanmar | | | | | | No IP Valuations done in respondents organizations |
| 6 | Vietnam | | | | | | |
| 7 | Singapore | ✓ | | | ✓ | ✓ | Not enough elaborated |
| 8 | Laos | | | | | | |

6.4.1

Table 26

6.4.2 As far as academic actors and universities are concerned, most actors cite technology risk analysis and market risk analysis primarily, sometimes CAPM.

6.4.3 In Singapore, one respondent said that discount rates are not based on any methodology.

6.5 – Conclusion

6.5.1 The question of determining the discount rate for DCF based on risk analysis seems largely empirical and based on the experts’ point of view.

6.5.2 Practices vary between actors and countries.

6.5.3 As discount rate is generally one of the main parameters critical to the value determined by DCF methods (thus generally for income / revenue-based methods), there appears to be a need to harmonize practices.

6.5.4 At minimum, there is a need to build awareness of all methods which can be used to assess risk, and how to combine them to determine ranges of suitable discount rates instead of one unique discount rate value carved in stone but strongly dependent on the assessor.

6.5.5 According to our experience, this is not particular to ASEAN countries, and is generally observed around the world.

Chapter 7 : Barriers to IPV

7.1 – Survey Results

7.1.1 Overall the survey results establish that across ASEAN, with few exceptions, IPV is largely underutilised and/or underdeveloped. In order to address this, we need to look at the underlying concerns. This part of this project was collating feedback on the ground on the reasons IPV is not being deployed.

| TABLE 10 PRACTITIONERS - BARRIERS TO IPV | | | | | | | | | |
|---|-------------|---------------|--------------------------------------|---------------------|--------------|----------------|-------------------------------------|--|---|
| No. | Country | Price / Costs | Lack Awareness / Understanding of IP | No Guidelines | No Data | Complex Issues | Professionalism / Lack of IP Valuer | Legal / Regulator Barriers | Remarks |
| 1 | Malaysia | ✓✓✓ | ✓✓✓ | ✓ | ✓✓✓ | ✓✓✓* | ✓ | ✓ Bank cannot use ✓ No account standard | * need more effort because complex To promote government support - such as IPFS, underwriting by government, Malaysia doing pioneering work here |
| 2 | Indonesia | - | ✓ | - | ✓✓✓ | ✓✓ | ✓ | - | |
| 3 | Thailand | - | ✓ | ✓ | ✓✓* | ✓✓✓ | - | ✓ | * management don't see market reference No responsible party (dedicated) |
| 4 | Philippines | ✓✓✓ | ✓✓✓✓✓ | ✓✓ | ✓✓✓✓✓ ✓✓✓ | ✓✓ | ✓✓✓✓✓ ✓✓✓ | - | ~ Not trust / reliable ~ No market for IP ~ High cost to produce IP ~ Limited use of IP ~ Too subjective (judgment) ~ Lack training |
| 5 | Myanmar | - | - | ✓ | ✓ | ✓ | - | - | ~ Without IP system hard to have IPV ~ Mainly lack of IP awareness |
| 6 | Vietnam | - | - | - | - | - | - | - | Not applicable |
| 7 | Singapore | - | ✓✓ | ✓ Need standards | ✓✓ | - | ✓ | - | ~ Misconceptions of versatility ~ Lack of use / Demand ~ Absence of market ~ Perceived "Lack of legal protection" (to ensure IPV?) ~ Volatility |
| 8 | Laos | - | - | - | - | - | - | - | Only one practitioner responded - Never done any IPV |

Legend :
 - Number of ticks refers to number of specific responses received from respondents. The higher the number of ticks, the greater the agreement amongst respondents that barrier is significant.
 - The ticks are allocated based on how the various responses are perceived as some answers were multi layered and long.

7.1.2

Table 10

| TABLE 11 ENTERPRISES - BARRIERS TO IPV | | | | | | | | |
|---|-------------|------------------------------------|-----------------------------|---|---|-----------------|----------|--|
| No. | Country | Price / Costs | Complexity / Complex Issues | Lack Awareness / Understanding of IP | Lack Professionalism / No Professionals | Not Reliable | No Data | Remarks |
| 1 | Malaysia | ✓* 50% | - | ✓ 50% | ✓ 33% | ✓ 50% to 67% | 50% | 67% of interviewee did IPV - This response is from 37% who did not do IPV |
| 2 | Indonesia | ✓ 50% | - | ✓ | ✓ | ✓ 25% | ✓ | Costs are main barrier in Indonesia with majority quoted as saying cost too high |
| 3 | Thailand | - | ✓✓✓✓ | ✓✓ | ✓ No professional body | - | - | ~ Often limited time to complete IPV (time constraints) ~ Concerns of transfer pricing ~ No IPV framework |
| 4 | Philippines | ✓✓✓ Most ranked this as top 3/7 | - | ✓ Most ranked this low - not main reason | ✓✓ 2/7 | ✓ 1/7 | ✓ 1/7 | Total of seven responses. x/y denotes number of responses (x) over total (y) |
| 5 | Myanmar | ✓✓ | - | Not a question of awareness | ✓✓ | - | ✓✓ | |
| 6 | Vietnam | - | - | - | - | - | - | Not applicable |
| 7 | Singapore | ✓ | - | ✓✓ | ✓ | - | ✓ | ~ Concerns of adoption and reliability (of IPV) ~ Regulatory issues ~ "Barriers vary based on company's size, industry, financial resources, and level of awareness" |
| 8 | Laos | - | - | - | - | - | - | |

Legend :
 - Number of ticks refers to number of specific responses received from respondents. The higher the number of ticks, the greater the agreement amongst respondents that barrier is significant.
 - The ticks are allocated based on how the various responses are perceived as some answers were multi layered and long.

7.1.3

Table 11

| TABLE 12 FINANCIAL COMMUNITIES - BARRIERS TO IPV | | | | | | | | | |
|---|-------------|---------------|--------------------------------------|----------------------|----------|----------------|--------------------|----------------------------|--|
| No. | Country | Price / Costs | Lack Awareness / Understanding of IP | No Guidelines | No Data | Complex Issues | Lack Professionals | Legal / Regulator Barriers | Remarks |
| 1 | Malaysia | ✓ 75% | ✓ 50% to 75% | ✓ 75% | ✓ 50% | - | - | - | Survey show responses: IPV Not reliable - 50% IPV Reliable - 50% Malaysia responses assessed by percentages of total responses |
| 2 | Indonesia | ✓ | - | - | ✓ | - | ✓ | - | Comment from respondent: Greater access to data and market information will result in use of IPV |
| 3 | Thailand | ✓ | ✓ | ✓ (No IPV manual) | ✓✓ | - | ✓✓ | - | ~ Concern that IPV not reliable ~ Risky - especially for new tech (unknown) ~ Do not believe IPR enforceable as collateral ~ Government fund will motivate |
| 4 | Philippines | - | - | - | - | - | - | - | Not available |
| 5 | Myanmar | ✓ | ✓ | - | ✓ | - | ✓ | - | IPV reliability is not the issue |
| 6 | Vietnam | - | - | - | - | - | - | - | Banking sector don't focus on IP assets |
| 7 | Singapore | - | ✓ | ✓ Unreliable IPV | ✓ | ✓ | ✓ | - | ~ Education on IPV needed / necessary ~ Need link between IPV and benefits ~ Lack need ~ Costs not an issue if benefits outweigh ~ Mainly its lack of awareness of usefulness of IPV |
| 8 | Laos | - | - | - | - | - | - | - | Not applicable |

Legend :
 - Number of ticks refers to number of specific responses received from respondents. The higher the number of ticks, the greater the agreement amongst respondents that barrier is significant.
 - The ticks are allocated based on how the various responses are perceived as some answers were multi layered and long.

7.1.4

Table 12

| TABLE 13 ACADEMIC - BARRIERS TO IPV | | | | | | | | | |
|--|-------------|-----------------------|---|---------------|----------------------------|----------------|--------------------------|----------------------------|---|
| No. | Country | Price / Costs | Lack Awareness / Understanding of IP | No Guidelines | No Data | Complex Issues | Lack Professionals | Legal / Regulator Barriers | Remarks |
| 1 | Malaysia | ✓ 60% (Most agree) | Mostly say not likely 15% to 20% say "yes" | - | ✓ 25% X 20% | - | ✓ 50% | - | About equal find reliable / not reliable Appears high level of awareness of IPV with academic in Malaysia |
| 2 | Indonesia | ✓ 38% of total 1 | ✓ 18% of total 4 | - | ✓ 35% of total 2 | - | ✓ 38% of total 1 | - | 26% below IPV unreliable Price and lack proof are key barriers |
| 3 | Thailand | ✓ | ✓ | - | ✓ | - | ✓ | - | ~ Not reliable ~ Should have IPV tool and standards ~ Low patent quality |
| 4 | Philippines | ✓ (5/11) | ✓ (1) | - | ✓ (5/11) | - | ✓ (8/11) | - | Highest number rank highly difficulty finding experts and no data Did not appear to think its about reliability (x/y) - x number of responses ranking "most likely" or "likely" - y is total responses |
| 5 | Myanmar | ✓ 60% | ✓ 80% to 100% likely or moderately likely | - | ✓ 80% moderately likely | - | ✓ Moderate difficulty | - | 80% agree IPV moderately reliable 20% do not agree IPV is not reliable |
| 6 | Vietnam | - | - | ✓ | - | ✓ | - | - | |
| 7 | Singapore | ✓ | ✓✓ | ✓ | ✓✓ | - | ✓ | - | ~ Reference in excel sheet only ~ Key is must show need; no IPV if no need |
| 8 | Laos | - | - | - | - | - | - | - | Not applicable |

Legend :
 - Number of ticks refers to number of specific responses received from respondents. The higher the number of ticks, the greater the agreement amongst respondents that barrier is significant.
 - The ticks are allocated based on how the various responses are perceived as some answers were multi layered and long.

7.1.5

Table 13

7.1.6 As seen in Tables 10 to 13, there are a variety of factors described as barriers to IPV.

7.1.7 The ability to appreciate and understand how IP is valued in each context / or each purpose is essential in making a decision to require the same. It impacts decisions whether to lend or invest, assess advisability on acquiring an IP asset, or to licence a technology, or whether to start an action for infringement, aside for facilitating strategic management decisions.

7.1.8 Whilst cost has been identified as important to enterprises, (see Table 11) particularly in Indonesia, Malaysia, Philippines, Singapore and Myanmar, there is equal emphasis on fact that too often there is a corresponding lack of awareness and understanding of

IP and IPV. It was also noted that such barrier vary based on the companies' size, industry, financial resources and level of awareness.

- 7.1.9 More pertinent is the input from the financial sector (*see Table 12*) – one respondent clearly stated that cost is not an issue if the benefits outweigh the same.

7.2 – Understanding IP to Drive Demand

- 7.2.1 The survey confirms there is still a need for more education and training as the lack of understanding of IP (and IPV) and the lack of awareness of what it can do cuts across all sectors.

- 7.2.2 This funding is even more important than the need for data *per se* (used in a valuation exercise) as it is linked to the demand.

- 7.2.3 If there is no demand for IPV because the market does not understand nor perceive a need for it, any capability development put out or training of IP valuers would be of limited reach and impact.

- 7.2.4 In the survey anecdotally, we see the following response:

- a. “management do not see market reference” (Thailand);
- b. believe there is “no market for IP” (Philippines);
- c. there is a high cost in (even) producing IP (Philippines);
- d. “absence of (a) market (for IP)” (Singapore);
- e. “lack of use / demand” (Singapore);
- f. “misconception of versatility (of IPV)” (Singapore);
- g. “risky especially for new technology” (Thailand);
- h. “banking sector don't focus on IP assets” (Vietnam); and
- i. “key is must show need; no IPV if no need” (Singapore).

- 7.2.5 The respondents stated that the lack of government support has implication on the use of IPV:

- a. Suggests IP financing scheme and government grants (for IPV) – (Malaysia); and

- b. Barrier is because do not believe IP as collateral is enforceable; a government fund will motivate – (Thailand).

7.2.6 There is therefore the clear potential of the enabling role of government.

7.2 – Data

7.3.1 The survey confirms that availability and reliability of data for the purpose of conducting IPV is a barrier.

7.3.2 In one of the interviews in the Singapore report (see excel spreadsheet for practitioners in Singapore Report) the summation is helpful:

“There are two main ingredients for the proliferation of IPV. Firstly, the commercial demand for these valuations. Secondly, creation of trust with reliable standards of valuations. To achieve the second point, data is needed to ensure that the results are consistent.”

7.3.3 We have addressed the issue of demand above.

7.3.4 Here we recognise that the collation of information and data that is relevant and useful is key to supporting IPV, particularly for credibility in the IP financing space – whether for debt financing or equity financing. The idea is for this to lead to more accurate, transparent and acceptable IPV.

7.3.5 There have been various solutions proposed.

7.3.6 In the European Commission Report on IPV 2013¹², the Expert Group proposed the establishment of a data source containing anonymous information on IP transactions, with suitable incentive in place to encourage disclosure such as a suitable fiscal relief or tax incentive. It also suggests making publication of anonymised data mandatory for public entities or listed companies.

7.3.7 In Singapore, there is an ongoing initiative to push forward an intangible assets disclosure framework. Multiple agencies, including the IP Office of Singapore, the Accounting and Corporate Regulatory Authority and the Monetary Authority of Singapore, are working with industry players to enhance intangible assets information transparency to facilitate the flow of IA and IP transactions¹³. To date the

¹² Final Report from the Expert Group on IP Valuation 29 November 2013 @ European Union pp 57 and 58

¹³ WIPO IPOS Report Unlocking IP Backed Financing: Country Perspectives – Singapore’s Journey p. 21 @WIPO 2021

underreporting of IP hinders the assessment of intangible asset value contribution, preventing efficient allocation of capital in the market.

7.4 – Financial Communities

- 7.4.1 In general, the consensus appears to be that the financial communities across ASEAN seems to have limited understanding and corresponding little use for IPV.
- 7.4.2 It is well understood that lenders / investors need to have confidence in intangibles before taking on the risk of such portfolios. However, in a chicken and egg kind of scenario, lenders particularly banks, are not sufficiently equipped with the knowledge relating to IP assets and IP values such that even in a risk assessment situation, they do not consider valuation of IP as necessary or supporting activity even though it will mean better informed lending decisions.
- 7.4.3 The information asymmetry or lack of understanding leads to banks being wary of accepting IP as collateral, even if an option to securitise IP revenue streams is available, thus leading to few, if any, use of IPV in debt financing.
- 7.4.4 It is also recognised that IPV alone might be insufficient to mainstream acceptance of IP as collateral. There are other areas that will need to be addressed, for instance the availability of a secondary market for lenders to monetise their IP collateral.

Chapter 8 : Conclusions and Recommendations

8.1 – Conclusions

- 8.1.1 We draw upon the survey and interviews conducted with the 343 participants across ASEAN to inform us, for conclusions, that allow us to make the appropriate recommendations for both national as well as regional adoption.
- 8.1.2 We can conclude that IPVs whether for businesses, organisations , tertiary institutes or publicly funded research agencies are not used at optimum levels and this can and should be improved given the economic significance and importance of IP assets.
- 8.1.3 On the positive side there is use of IPV across the four different sectors in the countries with more advanced IP systems and adoption – Malaysia, Indonesia, Singapore; and we see an upward trend in Philippines and Vietnam although overall numbers are not as high as expected. However, the surveys were helpful in identifying needs and the state of IPV support nationally and across ASEAN collectively. The respondents concur that IPV is still not very visible in practice.
- 8.1.4 There is a sense that based on the fact that IPV is used mainly in M&As, that it is the larger enterprises, and likely the more mature enterprises, that appreciate the benefit of such reports and can afford the same. In Singapore where it was confirmed that practitioners serve MNCs correlates with the fact that eighty of the top 100 technology companies of the world have set up in there.
- 8.1.5 Nevertheless, the SMEs and Start Ups equally have need of IPV but find costs a barrier, particularly the high transaction costs due to the complexity of the IP subject matter and perceived difficulty finding relevant expertise. This is concerning given how important SMEs are to any economy and the fact that an increasing proportion of assets owned by SMEs are non-physical or intangible, and the full value is not maximised or appropriated as confirmed by the OECD¹⁴. For these reasons, there is a case for policy intervention relating to the use of intangible assets and the related understanding on how IPVs support this , to also help enhance SME financing.
- 8.1.6 As different governments have already recognised the importance of enabling fast growing intangible rich companies to access financing, there are several models for consideration and adoption.

¹⁴ OECD SME and Entrepreneurship Paper 2019 – Fostering the use of Intangibles to Strengthen SME Access to Finance.

8.1.7 These include:

- Ring fenced funds established by development banks to stimulate credit to innovative businesses;
- Subsidies and guarantees to encourage private sector engagement;
- Korea’s model of Technology Credit Guarantee Fund and Special Measures for Venture business statutory framework combined with government funded IPV agency supported by specialist recovery institute;
- China’s patent pledge system which includes guarantee by regional government backed funds;
- Collateralised insurance policies adapted to cover IP value¹⁵;
- Japan’s two prong approach of supporting credit decision making processes for regional business lenders plus institutional education tailored to banking sector, to train up understanding of IPR and credit assessment, spearheaded by JPO together with Japan’s Financial Services Agency;
- Malaysia’s IP Financing Scheme that focusses on development of standards (called “IPV Model”) and IPV certified training for upskilling with subsequent loans financed by Malaysian Debt Ventures (MDV). Malaysia also attempts to simplify the valuation methodology by recommending a default method of IPV (i.e., Income method / Relief from royalty); and
- Singapore’s pilot IP Financing Scheme launched in 2014 based on a guarantee facility and focussed on recruiting mainstream banks initially for IP Financing applications, based on IPV reports from an approved panel (fees for IPV reports subsidised). Further iterations are being explored in the updated IP hub Masterplan 2017 and launch of Singapore IP Strategy (SIPS) 2030 plan in 2021¹⁶.

8.2 – Recommendations

8.2.1 Given the above, the following are our proposed recommendations:

- There is already a lot of training on IP as a subject and for protection, and also more now on IPV *per se*. From the survey, it appears there is a need for stronger emphasis

¹⁵ AON model – AON realises \$400 Million first close for Maiden IP Senior Lending Fund (Aon Publication); Coverage March 4, 2023, AON Advantage Fund Launch

¹⁶ WIPO IPOS report – Unlocking IP backed Financing Country Perspective 2021

on education that bridge business management, IP and IP value and valuations to drive demand. This can be done through:

- designated programs (whether certified or not);
- customised training for enterprises; for example, for SMEs, more towards strategic decision-making and debt financing whilst Start-Ups need greater emphasis raising equity finance from IP;
- strong government support to drive the initiative with financial community due to inertia from this sector. Possible through policy recommendations based on analysis of the national data of that AMS;
- provision of financial resources and grants or funds to conduct IPV that is recognised nationally to catalyse IPV proliferation with a view towards an ASEAN wide framework where IPV is regionally accepted whenever commonly agreed standards have been applied; and
- establish a Working Group on IPV within ASEAN including experts from other zones to continue consensus building, sharing of best practices and working towards the IPV framework with specific timelines for completion.

8.2.2 Introduce an IP Valuation Toolkit:

IP Valuation Toolkit

- To develop the Toolkit as a foundational resource – acceptable criteria for IPV, methodology and scoring for different categories of IP;
- Allow for commonly accepted IPV reports to be relied upon for co-operation and partnership within nations and with each other across ASEAN for regional impact / interoperability – avoid duplication of effort;
- Propose “common database” of accepted standards and practices that can inform and direct IPV across ASEAN for greater credibility and reliance of these IPV’s conducted – (shared capabilities);
- WIPO customised training workshops directed as these standards / practices for uniform deployment, exchange of information and sharing of benefits / case studies; and

- Development of a roadmap for IPV with a framework linked with appropriate level of national IP development and use in country including shift from public driven to private drive IPV use.

Toolkit Specifics

- For non-auditable decision-making purposes
 - Databases for comparisons
 - Indicators-based valuations for patents
 - Simple but rigorous DCF models
- For auditable reporting purposes
 - Due diligence checklists and recommendations
 - ✓ General concepts
 - ✓ Specific items by type of usage
 - Quantitative methods
 - ✓ Description
 - ✓ Limitations
 - ✓ Why and how to combine methods
 - ✓ Guidelines on determination of royalty rates
- For DCF-based methods in general
 - Risk analysis frames
 - Guidelines for determination of discount rates from risk analysis
 - NPV calculations and traps to be avoided

Note on IP Valuation Toolkit

- The idea behind the Toolkit is to drive understanding, adoption and demand. Because IP is by its nature unique, we recognise and acknowledge that and IPV report is a professional opinion at a particular point of time within a particular context and we have to be careful in promoting any simplified IPV that detracts from this fundamental understanding that it requires exercise of judgment. For example, understanding the underlying technologies and their usage is key, which implies that there are dangers to automating judgment¹⁷. For this reason, we emphasise that we support this and there must and always will be training and support for this level of competency and service standards, particularly for the more sophisticated ad informed entity.
- However as noted above, there is merit to addressing the unmet need of Start-ups, smaller SMEs and research institutes in LDCs that require access to some form of

¹⁷ European Commission – Final report from Expert Group on IP Valuation 2013

IPV, at the basic level, to facilitate decision making, and assist them in release of value from IP. It is meaningful within this context to encourage use and deployment of IPV, and with familiarity and widespread adoption, it is intended that this will drive demand for the more comprehensive IPV.

- End of Report -