Appendix III: Decisions on Recommendations – Dominance in Termination Markets

The following summarises the comments and recommendations received from stakeholders on September 22, 2017, and the decisions made by TATT as incorporated in the second round consultative document dated 18th May 2018

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		CCTL thanks the Authority for the opportunity to comment on the consultation document "Dominance in Wholesale Termination Markets." The views expressed herein are not exhaustive. Failure to address an issue in our response, does not indicate acceptance or agreement with that issue. We applaud TATT for changing its approach to this issue; that is, applying an economic and empirical analysis of the markets for termination services and using the results of this analysis to inform its dominance determinations. This is a much more reasonable and appropriate course than the existing approach of declaring all concessionaires whom provide termination services dominant on a per se basis. We believe, and international best-practice confirms, that whenever a concessionaire is declared dominant it must always be based upon sound economic analysis and a thorough empirical investigation. That said, we have concerns with TATT's investigation of termination service markets. We do not believe the	We encourage TATT to conduct a more thorough and complete analysis of the termination services markets, taking into account observed behavior of consumers and concessionaires, and applying a more rigorous investigation of viable substitutes. After conducting this comprehensive investigation of the termination services markets, we ask TATT to reconsider its initial conclusions.	The Authority will consult on this paper in accordance with its established consultation procedures. CCTL can provide the analysis it has conducted so that the Authority can compare its analysis with CCTL's. The Authority highlights that the factors quoted by CCTL may influence demand-side substitution at the retail level, but do not change the fact that, when a demand choice is made to select a particular termination network, no other operator can offer the termination for the selected network. Furthermore, if an OTT call is made,
		investigation was well considered or complete, and therefore we do not find the conclusions TATT has drawn from this investigation to be necessarily accurate.We articulate the shortcomings of this investigation in detail in these comments.		the decision to make an OTT call as opposed to a PSTN/PLMN is made prior to the termination of a call and occurs at the retail level. This is an origination choice. Based on the Authority's analysis, a) the retail

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		We reserve offering conclusions until after a complete investigation has been conducted. Our preliminary view, however, is that consumers have choices on to how to terminate telephone calls. Whether these choices constitute sufficient competition is yet to be determined, but it is a worthwhile exercise, which we believe TATT must give thoughtful consideration. When a customer places a call it is true they dial a specific telephone number, but what they are really doing is calling an individual, and that individual most likely subscribes to multiple modes or means of communication, such as a fixed		market does not pose a constraint on the termination market, and b) the "relevant wholesale market" has been proven to be a separate market and is defined as a voice call or SMS terminated to a called party's valid number range associated with PSTN/PLMN connections, for which a termination charge is applicable
		 line, one or more mobiles, and likely one or multiple OTT services. Each mode offers its own price, which providers advertise and most consumers are aware of. Therefore, we believe this evidence suggests that: consumers do have choices on how they wish to reach most people; consumers are aware of these choices; 		The Authority has heeded CCTL's request to conduct a more empirical analysis of the termination in the Trinidad and Tobago market, including the retail downstream market.
		 consumers base their choices on, among other things, the relative retail price of each option; and consumers exploit these different options, as evidenced by calling patterns and trends. 		The Authority has consequently updated the paper and described therein the technical differentiation between the wholesale and retail segments of call origination and termination and, under section 4, further analysed any potential competitive constraint of OTTs on the termination market. The Authority has demonstrated therein
				that, on the basis of a SSNIP, consumers will not respond to an

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				product market reveals that neither fixed or mobile subscriptions nor OTTs are substitutes for wholesale call termination. Consequently, the Authority supports the finding that termination is a market on its own.
1.1 Introduction	TSTT	The comments of Telecommunications Services of Trinidad and Tobago Limited (TSTT) on this document does not constrain TSTT from making further comments of a supporting or alternative view, as the industry evolves.		The Authority will consult on this document in accordance with its established consultation procedures.
1.2 Background	CCTL	TATT cites the "Costing Methodology of theTelecommunicationsSector of Trinidad and Tobago"	C	The Authority clarifies that the purpose

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	 (TATT 2008), and refers to two aspects of this determination: one, the costing approach applied to dominant concessionaires; and, two, the application of a dominance classification to all concessionaires providing terminating services on a per se basis. Based on these two positions, TATT indicates the purpose of this consultation will be to review "this stated position." To the extent the purpose is to reconsider its existing treatment of all concessionaires as per se dominant in providing terminating services on their network, we applaud this decision. To the extent the purpose is also to reconsider the costing approach applied to dominant concessionaires, such as CCA and LRAIC, we likewise applaud this decision, as this determination was reached almost a decade ago. Given the time elapsed and significant changes to the industry, there is an urgent need to revisit the methodologies TATT established in 2008. We would also like to note that this 2008 determination included a commitment by TATT to build a cost model within 36 months of the adoption of the methodology. The model build process started in 2009. However, after expending considerable time and resources on this process, there is still no final model or cost outputs that can be used to identify interconnection costs. The status of this project is unclear, and the industry needs clarity and transparency on the issue. In lieu of a cost model, Flow wishes to make clear that it supports the use of a benchmark study to arrive at 	dominance in this market. The assignment of dominance or significant market power is an inherently empirical matter, and accordingly should be evaluated on a case-by-case basis and not assumed or applied on a per se basis. Assuming the costing approach is part of what TATT considers a "position [that] should be reviewed, in the context of the evolving telecommunications landscape," CCTL refers TATT to CCTL's comments filed in the CCA and LRAIC consultation processes. TATT should provide the industry with a clear statement on the status of the costing methodology approach set out in "Costing Methodology of the Telecommunications Sector of Trinidad and Tobago" (TATT 2008).	of the dominance assessment is not to reconsider the costing approach applied to dominant concessionaires, such as CCA and LRAIC but, rather, to establish whether dominance exists in local call termination markets. Where there is the case of dominance in termination markets, the Authority will consider implementing remedies only when necessary and proportionate to the degree of the competitive problem, including the abuse of dominance. The form of price regulation would be determined in accordance with the Act and any subsidiary regulations. The remedy for the termination market, for the period 2018 to 2020, which the Authority will employ, would be the outputs of the finalised Interconnection Benchmarking Study, which is in accordance with Regulation 15 of the Telecommunications Interconnection Regulations.

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		interconnection prices.		Authority notes that this model was developed and completed in 2010. Due to the lack of data from service providers to produce more robust results, the model has not been implemented in the industry.
				Furthermore, of the seven operators who participated in the preparation of the Authority's costing methodologies, costing models and formulaic calculations, three operators posed objections to the Authority's implementation of the model.
				Over an extended period between 2011 to 2016, the Authority engaged in several activities geared towards addressing the concerns raised by the operators including, <i>inter alia</i> , requests for more transparency of the model, the need for further testing of the model, requests for full access to the model, requests for a completely different type of model to account for specific networks, and the use of the model for only dominant operators.
				The Authority also engaged those operators with several initiatives geared towards a collaborative approach to

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				moving the model along towards implementation. More recently, the Authority held model testing and model access sessions at its offices, and demonstrated and underscored that the data presented by these operators during the initial model run were deficient in many ways. Thus, the Authority concluded that these initial modelling results were not sufficiently robust to inform interconnection rates in Trinidad and Tobago and the Authority would require more reliable operator data to populate and further test the LRAIC model.
				Subsequent to the access sessions, several recommendations were again proposed by the operators including, <i>inter alia</i> , revisions of the model, requests for copies of the model, the continuation of testing, and the request for further consultation on the CCA Reference and LRAIC Specification Papers. Additionally, there were new and varied requests from operators, such as a request for the creation of a new model that suits their particular network(s).

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			These requests by operators over the years have been changing and thus the implementation of the model, to the full satisfaction of all operators, has been held up. In response, the Authority has since undertaken consultations on the CCA Reference and LRAIC Specification Papers. The Authority takes note of CCTL's comment, "In lieu of a cost model, Flow wishes to make clear that it supports the use of a benchmark study to arrive at interconnection prices." In response, the Authority advises that, in light of the pending renewal of the interconnection agreements, it was necessary for the Authority to act within its mandate to develop alternatives to guide the sector, particularly for the other four interconnection seekers who were involved in the process.
		Likewise, we recommend the approach be reviewed and brought in line with international best practice. In lieu of a cost model, Flow supports the use of a benchmark study to arrive at	The benchmarking study was used in fulfilment of Regulation 15(2) of the Telecommunications (Interconnection) Regulations (2006). However, CCTL should also take into

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			interconnection prices, such as the study presented by TATT in its 29 March 2017 report "Results of an Interconnection Benchmarking Study for the Telecommunications Sector of Trinidad and Tobago."	consideration that the Authority will also be pursuing avenues to progress a cost model, which shall be consulted upon in due course but prior to the next interconnection negotiating period.
1.2 Background	TSTT	TATT should take due care of its citation of the Act, and the assumptions about what powers the cited sections afford it. As an example, TSTT notes the citation of 29 (2, (6) and (8) of the Act. Firstly, TATT is reminded that these clauses are subject to the passage of Price Regulations in the Parliament. In the absence of same, TATT is constrained. Secondly, and with respect to 29(8) in particular, TATT is reminded that this clause is subject to a proper interpretation in law and thorough economic analysis.	TATT should ensure that they consider territory comparability before benchmarking regulatory positions as it relates to dominance in wholesale termination markets.	The Authority clarifies to TSTT that sections 29 (2) (6) and (8) of the Act are not subject to the passage of price regulations in Parliament. Furthermore, the Authority wishes to clarify that it has not conducted a benchmarking exercise. Rather, the Authority referenced research as an example of international best practice with regard to the determination of dominance in termination markets. The Authority has amended the document to include such information in an appendix so it can be appropriately considered, as reference material only, for the Trinidad and Tobago assessment. According to section 29 (8) of the Act, the Authority may determine that an
		with others" throughout this document. This term evident in precedent set by the EU Competition Body, presumes		operator or provider is dominant where,

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		merger power and is used as a test prior to approval of a business combination. The inclusion of this concept is quizzical, as in the recent past, TATT's actions have permitted mergers in the telecommunications sector in Trinidad and Tobago without any public determination demonstrating the application of this principle.		individually or jointly with others, it enjoys a position of economic strength, affording it the power to behave, to an appreciable extent, independently of competitors, customers and, ultimately, consumers. Additionally within the Authority's draft Pricing regulations the term jointly dominant is defined as "Joint-dominance may be evident because of structural linkages between firms, which allow them to indirectly synchronize prices in the market- a practice sometimes referred to as tacit collusion."
Section 1.2 'The Costing Methodology for the Trinidad and Tobago Telecommunications Sector provides for, inter alia, a costing approach to be implemented by dominant concessionaires; and prescribes that a "concessionaire that	TSTT	As stated above, TATT is legally bound to produce the proper regulations which would give a clear legal guidance and limits, to its price regulatory framework. As such, TSTT posits that the completion of proper Pricing Regulations is required before the consideration of any remedy, which may include some use of the costing methodology as proposed. With respect to the referenced Costing Methodology, this also preambles the recommendation of the Arbitration Panel which, among other things, advised that TATT develop a proper industry costing model. We at TSTT continue to look for this model and await TATT's appropriate resolution of	TATT to complete all relevant Regulations and develop an adequate Cost Model that is fit for purpose. Until such time TSTT's model will be used.	The Authority, in the consultative paper on dominance, is not advocating price remedies. In this instance, the Authority is reviewing the relevance of the catch- all statement contained in the costing methodology as it applies to dominance in call termination markets. For the application of remedies, the Authority will rely on its current legal

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provides interconnection service shall be considered dominant in providing termination services on its network" ¹		the many outstanding flaws in the last model presented to market participants.		mandate contained in section 29 of the Act and the Interconnection Regulations (2006). The Authority categorically refutes any claims that it is not acting in accordance with local laws. TSTT is asked to provide further clarification on its statement, <i>"International Regulatory practices continue to be guided by the laws of their local jurisdiction. TATT needs to properly contextualize its review process within the confines of the local Constitution."</i> In accordance with its legal mandate, the Authority shall continue to assess costs, as well as the progressing of a cost model and the use of benchmarks.
		Notwithstanding this delay, TSTT reaffirms and reminds TATT that TSTT's Internal Cost Model was determined by TATT to be in conformance with the Costing Methodology. International Regulatory practices continue to be guided by the laws of their local jurisdiction. TATT needs to properly contextualize its review process within the confines of the local Constitution.		Any model used by TSTT for the determination of regulated rates must first be reviewed and approved by the Authority for compliance with the costing methodology. The Authority has not approved any internal cost model of any operator in the domestic market.

¹ See Costing Methodology of the Telecommunications Sector of Trinidad and Tobago (TATT 2008, 22)

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Sub-Section 1.3 Purpose This report presents the methodologies used by other jurisdictions in validating determinations of dominance in wholesale terminations markets, and review these methodologies within the context of the Authority's Regulatory Framework. This document also sets out the Authority's position on dominance in wholesale termination markets.	Made By TSTT	 TSTT is concerned that this document has been prematurely published for public comment as same seems more akin to a desk study or a summary of such. While this document summarises steps taken in other jurisdictions, there is no evidence that similar action has been undertaken by TATT in this jurisdiction. Surely, TATT realizes that as a result of local peculiarities, the absolute conclusion or solution to issues in other jurisdictions may not be appropriate for the challenges, issues or policy aims it pursues in this jurisdiction. In this context, TSTT believes that considerably more work is required by TATT, allowing it to demonstrate, with relevant data, that is has completed comparative primary studies in this market. Additionally, TATT must thereafter clarify how the outputs of these primary studies reflect concrete hypotheses about possible areas of market failure domestically. In the absence of such work, this desk study merely forms the basis of highlighting TATT's capacity for collecting non-quantitative and non-qualitative information and summarizing such information in an extended extract. Detailed considerations on the role of Competition Authorities though clearly absent is necessary to facilitate a more thorough analysis of the legal considerations facing Trinidad and Tobago. 	TATT needs to determine and present appropriate sources of primary data and an appropriate methodology to undertake studies which summarises the actual market situation in Trinidad and Tobago. TATT should similarly do a broader assessment of the legal, political and economic context of the jurisdictions it uses as benchmarks to better understand the context of the practices it is seeking to emulate. This will aid in determining if these practices are relevant to SIDS in the Caribbean. The absence of detailed considerations on the role of Competition Authorities stands out as missing for a fuller analysis of the legal considerations facing T&T.	The document has been revised to consider all the attributes of the Trinidad and Tobago market in full. Though the Authority shall soon receive competition powers via the proposed amendments to the Telecommunications Act, it is well within its mandate to present the analysis of termination markets in Trinidad and Tobago. TSTT has put forward no substantive reason for disqualifying this document for consultation. The Authority sees no premature publication. The arbitration panel established by TATT to adjudicate the first dispute between Digicel and TSTT explicitly stated, on pages 21 to 22 of decision, Digicel vs. TSTT Arbitration Decision No. 2/2006, dated August 16, 2006, "Considering mobile termination is a monopoly market, the panel interprets the approach to cost-based charging in the Act and Concessions as originating from the expectation that there is likely to be a lack of competitive effects on

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1.4 Legislative Basis "1.4.1 – Section 29(8): For the purposes of this Part(Price Regulation) and wherever the issue of dominance otherwise arises in the Act, the Authority may determine that an operator or provider is dominant	TSTT	 In the context of the legal tests identified in the Act, with respect to the determination of dominance, TSTT would like to highlight: (b) technology and market trends; Nowhere in this analysis has it been made clear to TSTT that TATT has considered the number of Concessions issued in Trinidad and Tobago, and whether the impact of modern technology has removed/eliminated barriers to market entry, this voiding the consideration of markets. 	TSTT notes the absence of consideration of this statutorily defined test from this analysis.	The Authority considered technology and market trends in the local scenario and has updated the paper accordingly. (See section 5.) With regard to the Pricing Regulations, the Authority has considered the evolving telecommunications competition landscape and, in light of the pending Act amendments, sees it

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where, individually or jointly with others, it enjoys a position of economic strength"		and (f) any other matters that the Authority deems relevant. TSTT feels compelled to remind TATT that before TATT Attempts to utilise this clause, there must be a transparent process through which "other matters" and tests are "deemed relevant". Further, broad stakeholder engagement, including from the national competition regulator with a far more-reaching mandate should be a key party in any assessment, given TATT's constraint by the Telecoms Act and the inherent dangers that myopic conclusions may be in appropriately and inadvertently drawn.	The market awaits the Pricing Regulations consulted on since 2015.	 prudent to await the promulgation of the amended Act so that any price regulation can be appropriately aligned and identified within the wider competition mandate. This will also provide greater transparency and regulatory certainty for all stakeholders involved. In response to TSTT's comment on the national competition regulator, the Authority has been designated as the competition authority for the local telecommunications sector in accordance with the Fair Trading Act Chapter 81:13 Laws Of Trinidad And Tobago Act 13 of 2006, section 3 (1) (g) http://rgd.legalaffairs.gov.tt/laws2/alph abetical_list/lawspdfs/81.13.pdf

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Sub-Section 1.4.3 The Regulatory Process for the Review of Dominance	Made By CCTL	TATT excerpts from paragraph A23 of a 2007 Concession. This excerpt states that a Concessionaire may be declared dominant if "[it] serves over one hundred and fifty percent (150%) of its Average Market Share," where Average Market Share is defined as "the percentage arrived at by equal division of the defined market among all concessionaires operating in that market". So, for instance, in a market with four Concessionaires, any Concessionaire with a market share equal to or greater than 38% (100%/4 x 150%) is deemed dominant, according to this 2007 Concession. The excerpt also states that a Concessionaire is dominant in any market where two or more of the following conditions are satisfied: (i) mature market; (ii) homogenous product; (iii)similar cost structures; (iv)similar market shares; (v) lack of technical innovation and mature technology; (vi)absence of excess capacity; (vii) lack of potential competition; (viii) reduced scope for price competition; or (ix)high barriers to entry Nowhere else in the Consultation Document does TATT cite or refer to this regulatory process. It is unclear why TATT included this excerpt and how, if at all, it intends to apply these criteria to evaluate market dominance. We wish to make clear, however, that these criteria are grossly inadequate, inappropriate or irrelevant to any economically sound assessment of market dominance or significant market	Please clarify the relevance and applicability of the conditions for assessing market dominance, excerpted from paragraph A23 of the "Concession for the operation of a Public Telecommunications Network and/or the Provision of Public Telecommunications and Broadcasting Services (TATT 2007).	The Authority is mandated to be guided by the Act in the assessment of dominance and the abuse of same. Furthermore, the Authority did examine entry and exit barriers, along with market share and other relevant criteria mandated. (See section 5.) In summary, section 5 proves that the economic and technical characteristics of the fixed and mobile networks provide sufficient evidence to conclude that there is dominance in the provision of fixed and mobile termination services on a given operator's network. Termination markets in Trinidad and Tobago have the following characteristics: i. 100% market share ownership by the terminating network provider ii. lack of competition iii. lack of potential

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		that a company has significant market power. More specifically, while a small market share is sufficient to reject dominance, a large market share is not sufficient to assign dominance. Absent a complete evaluation of the market, including criteria such as entry and exit barriers, a large market share says little about a firm's market power. After all, where barriers to entry or expansion are low, a firm cannot exercise significant market power, even if it has a large market share. Second, the conditions cited above, which in any combination apparently signify dominance are innocuous. For instance, take any two conditions, e.g., a mature market and homogenous output: it is entirely unclear how a mature market for a homogenous product reveals dominance. Therefore, we ask TATT to clarify the relevance and applicability of these conditions for assessing market dominance.		competition iv. lack of countervailing buyer power These characteristics can allow for potential increases in termination rates above and beyond prevailing market rates. Based on the Authority's analysis, fixed and mobile operators' pricing of termination services is unconstrained by competition and therefore these operators are monopolists in each relevant termination market. With reference to Concession Condition A23, it is assumed, all things being equal, that a terminating concessionaire's market share is 100% and therefore the scenarios presented for presumed dominance do not hold in this case.
1.4.4 The Legal Basis for considering Dominance in Termination Markets	TSTT	TSTT disagrees with this statement.By its stated purpose, TATT seeks to infringe on the constitutional rights of corporate persons by seeking to	1 0	The Telecommunications Act 47:31, the parent legislation/ primary Act, empowers the Authority to create secondary/ subordinate legislation as

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"Given this and the Authority's regulatory powers as outlined in the previous section, the consideration of dominance in the provision of wholesale termination services is justified legitimate and within the Authority's legal remit."		bypass the Pricing Regulations (as mandated by this very section of the Act), which TATT has failed to bring into force. This is particularly noteworthy as a breach in process, considering it is within that document discourse and analysis for market determination is required and benchmarking attempted.	marketplace, outside from established legal instruments which provide for same. TATT should complete its Pricing Regulation Framework and Regulations, wherein market conditions are holistically developed before proceeding with any consultation on this apparently incomplete study.	set out in both sections 18 and 78. The idea of a subordinate legislation is to provide the details and specifics attached to the particular subject matter identified in the parent legislation, thereby promoting the smooth application of objective of the parent legislation/ act. Notwithstanding the Authority's power under section 78 to create subordinate legislation prescribing price regulation, Section 29(8) of the Act (as supported by concession condition A23), explicitly sets out the conditions/ factors by which the Authority may determine a dominant provider, quite separate and apart from the creation and passage of any such subordinate legislation. It is also worthy to note that section 78 provides that the Authority <i>"shall make such Regulations, as</i> <i>may be required</i> " Section 29(8) may therefore be relied upon to make such determination of dominance independent of the creation of Pricing Regulations or until such time as the Pricing regulations are passed. For completeness TSTT is advised that the following jurisdictions have relied solely upon its respective

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				 telecommunications legislation (primary legislation) to inform dominance matters. United Kingdom (OFCOM) – Communications Act 2003 Bermuda - Regulatory Authority Act, 2011 Jamaica (Office of Utilities Regulation (OUR)) – Jamaica Telecommunications Act 2000 British Virgin Islands (Telecommunications Regulatory Commission (TRC)) – Telecommunications Act 2006
 1.6 Definition of Terms "Where applicable, the following definitions shall be read in conjunction with the Telecommunications Act Chap47:31. 2. "Carriers" is an alternative term for owners of providers or public 	TSTT	 TSTT notes TATT's apparent inconsistency in the use of terms included in this document and the same terms used within other Trinidad and Tobago's relevant legal documents. TSTT reminds TATT that the context and the source of these terms being inserted may veer significantly from the statutory context of Trinidad and Tobago. As such to import these terms without due care, may cause regulatory lacunas given the specific legal context of these terms constituted in the jurisdictions from which they were imported. 	terms imported from documents from other jurisdictions where the definition and contexts considered therein does not align with the Trinidad and Tobago regulatory regime. This is required to ensure consistency of interpretation in this country's telecommunications legislative framework.	The Authority appreciates the comment from TSTT and clarifies that the term "carrier" is a universal term used in the industry. However, for further clarity, the Authority has replaced the term with "service provider" to reflect the statutory/regulatory context of Trinidad and Tobago. This is also based upon a close examination of the context of the word used in the document by the Authority, which demonstrates no

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telecommunications services, typically used in international jurisdictions. 10. "Product Dimension" means the characteristics that are used to define a product.				 diversion from the provider of termination services. For improved clarity, the term "product dimension" has also been replaced by a descriptive statement. The Authority has amended the document to include all country-reviewed information as an appendix so it can be appropriately considered, as reference material only, for the Trinidad and Tobago assessment.
2. International Best Practices – Considering Dominance in Wholesale Termination Markets	CCTL	TATT applies a benchmark approach to reach many conclusions on the termination markets in Trinidad & Tobago. This benchmark approach considers the findings on wholesale termination in five countries: two Caribbean countries (Jamaica and BVI); two developing countries (Malta and Bahrain); and the United Kingdom. TATT uses these findings to draw conclusions on the termination markets in Trinidad & Tobago. Flow does not object to a benchmark approach, so long as it is transparent and the results of the study are sufficiently articulated, justified, and confirmed to be relevant to Trinidad & Tobago. Flow's concern with TATT benchmark approach is that it presents conclusions, apparently based on the findings and analyses presented in benchmark studies or reports, but it does not describe the underlying analyses, how	utility and confidence in its benchmark conclusions by articulating the facts underlying each conclusion and explaining how those facts are applicable and relevant to Trinidad & Tobago.	The Authority clarifies that this document is not a benchmarking exercise and about finding an average but, as stated in the document's section 1.3, the Authority identified the methodologies used by other jurisdictions for assessing dominance in termination markets. Furthermore, the Authority has come to its conclusion on the study based on the consideration of factors contained in the Act in determining dominance in Trinidad and Tobago. The Authority

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	they were conducted, or whether they are in fact applicable or relevant to Trinidad & Tobago.		has clarified this methodology within the document. (See section 3.) Though the Authority had presented an analysis of the Trinidad and Tobago market in section 3, and particularly section 3.2 in the first round consultative document, it has updated the paper to describe, in further detail, the underlying analyses and the approaches relevant to Trinidad and Tobago. (See sections 4 and 5.)

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 2. International Best Practices – Considering Dominance in Wholesale Termination Markets "The selected jurisdictions utilised a comprehensive and systematic approach to examining dominance in termination markets. Interconnection and termination wholesale markets are considered important by these jurisdictions, as they ultimately impact the competitiveness of downstream communications markets, ensuring the maximization of consumer benefits;" 	TSTT	TATT's jurisdiction is Trinidad and Tobago. As such, TATT should perform comparable work to determine the actual market conditions in Trinidad and Tobago, instead of seeking to transpose the outputs of subjectively selected countries for this republic, especially where those markets do not reflect the market or technology mix evident in Trinidad and Tobago today.	TATT needs to support this statement with solid evidence so as to prove its validity.	The Authority clarifies that it has not based its conclusions of the study on a transposing exercise but rather on the consideration of factors contained in the Act for the consideration of dominance in Trinidad and Tobago. (See section 3.) Though the Authority had analysed the Trinidad and Tobago market in section 3, particularly section 3.2 in the first round consultative document, it has updated the paper to describe, in further detail, the underlying analyses and approaches relevant to Trinidad and Tobago. (See sections 4 and 5.)
3. The Analytical Framework for Considering Dominance in Termination Markets	CCTL	Section 3 presents TATT's analytical framework for evaluating dominance in termination markets. The conclusions TATT draws from this framework are based largely on unstated and unsupported empirical assertions. We hope to make clear in the following discussion of this framework that the assertions made in this section require closer evaluation, elaboration and/or reconsideration. In each		The Authority clarifies, once more, that it has not conducted a benchmarking exercise. CCTL has stated that the framework analysis presented in section 3 (first

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		instance, there is a need to confirm that the benchmark finding and empirics are relevant to the termination markets in Trinidad & Tobago.		round consultative document) requires closer evaluation, elaboration and/or reconsideration. Though CCTL has not specified which factors are relevant for consideration in the termination markets, the Authority has presented more detailed analysis in the revised document with supporting empirical evidence. In particular, section 5 reviews dominance based on the local framework.
3.1.1.1 The Demand-side Substitution Test	CCTL	 TATT presents the following findings on demand-side substitution, based on results from the five benchmarks: "the buyer of termination services [that is, the operator or by extension the customer who is placing a call] cannot substitute call termination services." "There are no effective substitutes for the caller who wishes to call a given party's fixed or mobile number." "Whether a consumer owns multiple handsets or multiple SIMs or not is irrelevant, given that a subscriber or a network registered telephone cannot substitute where it terminates." "[The sellers of termination services] have few or no incentives to lower the price of calls to their network from another network." 	We recommend TATT consider the omissions to its investigation presented herein. We ask that each of the omitted factors be given appropriate consideration in order for TATT to arrive at an accurate conclusion regarding the extent of demand- side substitutes for termination services in Trinidad & Tobago.	The Authority takes note of CCTL's comments. The Authority has provided further empirical analysis, including the price elasticity component of the SSNIP, in the second consultative document, which disproves CCTL's comment. Specifically, on the basis of a 5% SSNIP, consumers will not respond to an increase in the price of termination rates, as they will not be sufficiently aware of the price increase, and, furthermore, would not deem the same price increase sufficiently material to

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Sub-Section	Made By	 TATT uses these four findings to conclude that "there is no effective demand-side substitution for wholesale fixed and mobile termination services." We cannot tell, from what TATT has presented, whether this conclusion is accurate. It does not explain whether these findings, in fact, apply or consider evidence on the termination services markets in Trinidad & Tobago. There are several facts on the Trinidad & Tobago market that suggest there are demand-side substitutes. First, customers can and do consume substitute termination services and this is observed in consumers usage patterns and trends. Second, if follows from our first point, therefore, that the modes or different means of receiving telephonic communication are relevant to evaluating substitution and should be given due consideration. Let us start with a description of this process, consistent with how TATT describes it: When a customer makes a call to a telephone number, that customer's operator must deliver the call to the operator that serves the called telephone number, regardless of the price that operator charges for terminating access. The calling customer's operator does not have a choice of terminating provider. That choice is made by the customer receiving the call. This is the story suggested by TATT, 		react to at the retail level. This finding is also supported by the estimated inelastic cross price elasticity of demand between termination and retail services and the inelastic estimated point elasticities of demand derived from the local fixed and mobile telecommunications market. Based on the SSNIP test, there is a distinct separation between retail and wholesale and, therefore, potential competition between services of any defined retail market is not induced by a SSNIP in the termination market. Consequently, based on the local review and analysis undertaken, evidence is not forthcoming to suggest that the termination market is not a market on its own. CCTL is, therefore, asked to provide the empirical evidence to support its claims. No competitive constraints create market conditions that allow the terminating operator to increase its termination charge.

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		which leads them to their conclusion that no termination		
		substitutes exist. This however is not a complete story and		
		ignores many additional factors, each of which are relevant		
		to Trinidad & Tobago:		
		• First, the calling customer's operator must recover the costs		
		that it incurs for terminating access expenses in the retail		
		price of that call. Therefore, the price it charges its		
		customers for making off-net calls (or sending off-net text messages) will influence its customers' demand for these		
		services. In Trinidad & Tobago, there is no restriction		
		against pricing calls based on their destination or terminating		
		network and, in fact, we observe that operators do price their		
		off-net services based on the terminating operator's network.		
		on het services based on the terminating operator s network.		
		• Second, operators advertise these prices widely, on their		
		website, the Internet, newspapers, in their stores, etc. and		
		most customers are aware of these prices when they initiate a		
		call or send a text message. These prices are demonstrated to		
		impact consumer demand.		
		• Third, when a customer places a call it is true they dial a		
		specific telephone number, but what they are really doing is		
		calling an individual, and that individual in many or most		
		instances subscribes to multiple modes or means of		
		communication, such as a fixed line, one or more mobiles,		
		and one or more OTT services. In other words, callers today		
		often have a choice on how they wish to reach most people,		
		and this decision is influenced by the relative retail price of		
		each option.		
		• Fourth, sellers of termination services do have some		
		incentive to reduce their prices. Voice calling and text		

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		 messaging are network services, which implies that consumer value both making calls and receiving calls. If the retail price other operators charge to call you is based on your operator's termination fee, then this will impact the volume of calls you receive and, all things equal, the fewer calls you receive, the less you value your service and more likely you are to switch operators. Termination services are also a source of revenue for operators, and one way to increase these revenues could be by reducing the termination price. We reiterate that while each of these factors apply to Trinidad & Tobago, further analysis should be conducted to assess the extent to which they are binding in each termination service market. We reserve our conclusion on the extent of competition in these markets until such an investigation has been conducted. 		
3.1.2 The Geographic Market The economic (Calling Party Pays system) and technical characteristics of a network provide incentives for terminating operators to increase its termination charge without competitive constraints. These market	TSTT	Again, this section seems to ignore TATT's Draft Pricing Regulation Framework (2015) in the determination of markets. Given that any determination of markets is supposed to be undertaken under the rubric of the Pricing Regulations, this disconnect undermines the long term validity of this paper, and raises questions as to the applicability of its findings in the context of the broader, holistic Pricing Regulation Framework.The methodology in defining the relevant market was consistent among all five regulators. Table 2 presents the Authority's market definitions which are informed by the	1) The amendments to the Authorisation Framework	The Authority clarifies that it is well within its mandate to review markets and assess for dominance in accordance with section 29 of the Act. The Authority further clarifies that sections 29 (2) (6) and (8) of the Act can be upheld, irrespective of the passage of the revised pricing and authorisation frameworks.
characteristics restrict demand and supply		policies of the sample regulators.	TATT can provide an alternative to pricing method to CPP system as in the USA.	The Authority has also fully considered

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Sub-Section substitution, and therefore, wholesale termination on each individual network constitutes a separate relevant market. The methodology in defining the relevant market was consistent among all five regulators."	Made By	TATT's proposal to wholeheartedly adopt the outcomes of policy frameworks which have not been comprehensively evaluated for appropriateness to Trinidad and Tobago is worrying. Has TATT done studies of the Trinidad and Tobago population over the last 7 to 10 years? This should be the first step taken towards achieving the purpose outlined by TATT		alternatives to the CPP including the Bill and Keep method. However, the Authority underscores that based on a review of interconnection data provided by local operators; traffic is not symmetrical amongst parties and therefore a bill and keep alternative is not a desirable as it is unlikely to assist in the removal of barriers to entry and in improving competition.
			TATT's policies should be informed by current analyses and studies conducted in Trinidad and Tobago.	Once more, the Authority clarifies that it has not wholeheartedly adopted the outcomes of the reviewed jurisdictions, but rather based its findings on the consideration of factors contained in the Act (section 29) for its deliberations on dominance in Trinidad and Tobago. While the outcomes of the various jurisdictions support the findings of the consultative document, the analysis undertaken in this determination was based upon the Trinidad and Tobago legal and regulatory context.
				Though the Authority had analysed the Trinidad and Tobago market in section 3, particularly section 3.2 (of the first consultative document), it has updated

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Sub-Section 3.1.4 Market share	Made By CCTL	TATT offers the following conclusory statement:	We ask TATT to explain or reconsider its	the paper to describe, in further detail, the methodology employed specifically for Trinidad and Tobago, the underlying analyses and the approaches relevant to Trinidad and Tobago.
analysis		"As discussed in the market definition section, termination for a particular call can only be made on the particular network to which the called number belongs and there is no effective substitute for traditional call termination on a given network. As a result, all network operators providing termination services have an implicit 100 per cent share in both volumes and revenues for termination services over their own network." This conclusion follows from the findings presented in 3.1.1.1 on demand-side substitution. One objection we presented in our response to that subsection is that TATT appears to believe, without explanation, that the substitution analysis begins after the caller has decided which telephone	conclusion that the exercise to identify demand-side substitutes starts after a caller has selected which telephone number to dial. If TATT chooses to reconsider this finding,	The Authority clarifies that the factors impacting the decision of a consumer, in relation to number and network, may impact call origination, which is not the market in question. The Authority further clarifies that, after the decision is made by the consumer on who to call via traditional calling, there is no way for the caller to choose an alternative traditional form on which to terminate. This buttresses our findings.
		number to dial; that is, the telephone number selected to reach an individual is exogenous or somehow preordained. If this is the case, then it requires explanation.Absent a compelling explanation, however, we do not agree with the finding. For instance, if the cost to call Mrs. Smith on network X is less than the cost to call Mrs. Smith on network Y, then all things equal, the economically rationale decision is to call Mrs. Smith on her network X telephone		Therefore, using CCTL's example, if the economically rationale decision is to call Mrs. Smith on her network X telephone number (due to lower price), network Y cannot offer that termination service. Only Network X can do that, thus network X has 100% of the market for

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	number. This is a decision based on economic substitution Therefore, it is incumbent upon TATT to explain why such substitution is not relevant or not sufficiently binding.		calls chosen for termination on its network. Termination of a particular call can only be made on the particular called party's valid number range associated with PSTN or PLMN connections for which a termination charge is applicable and there are no effective substitutes for traditional call termination on a given network. As a result, all service providers providing termination services have an implicit 100% share in both volumes and revenues for termination services over their own network(s). Consequently, there is a strong presumption of monopoly power. In the absence of regulation, network operators can set termination charges above costs. The Authority posits that network operators enjoy 100% market share in their individual termination market.

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3.1.5 Potential Competition and 3.1.6 Countervailing Buyer Power	CCTL	TATT makes several statements about how " the Innate technological elements of interconnection" or " the inherent technological barriers" necessarily "make the terminating operator dominant." Therefore, any other characteristics about the market, such as the number of competing operators, is largely irrelevant to TATT. We do not necessarily agree with this finding. However, absent a basis for or explanation why it applies to the termination markets in Trinidad & Tobago, it is difficult to offer any conclusion, of agreement or disagreement.	the basis for its conclusion that the innate or inherent technology used to provide termination services render providers of these services dominant.	The Authority clarifies that the number of competing operators at the wholesale level does not change the fact that all operators are mandated to interconnect. Therefore, each operator owns 100% of its termination market. Furthermore, irrespective of the technology employed (2G, 3G, 4G, 4G LTE), based on traditional calling networks, and existing agreements for interconnection (particularly the CPP regime ²), including call termination, only CCTL for example can terminate CCTL's calls. Another operator, for example, a mobile operator, cannot terminate this call destined for CCTL's network.
3.2 Analysis of the Trinidad and Tobago Termination Market	CCTL	 Section 3.2 is largely a repetition of the previous section, Section 3.1. It provides many conclusions, but with little or no explanation as to how these conclusions were arrived at or whether they are in fact applicable to Trinidad & Tobago. That is, contrary to the Section's title, TATT neither identifies or presents any analyses specific to the Trinidad & Tobago termination markets. A fundamental conclusion also reappears in this section. 	present them to Concessionaires	The Authority has provided further analyses specific to the Trinidad and Tobago market in the revised document. In particular, the potential for gains under the CPP regime applied in Trinidad and Tobago increases the

² The calling party pays (CPP) regime is a billing method in which a mobile telephone caller pays only for making calls and not for receiving them. The calling party pays the total price for a retail call. This regime is applied in Trinidad and Tobago.

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		Namely, TATT states that "the called party is largely non- sensitive to the price of termination" and therefore, this implies "the incentive of an operator to keep termination rates at the competitive level are limited." It is worth repeating that this assertion requires explanation and support. Termination services necessarily operate in a network environment, which means that users of that network value both making and receiving calls (among other things). If a user stops receiving or receives fewer calls based on the cost of calling her, would not her provider have an incentive to retain her as a customer by addressing this shortcoming and reducing its price of termination? To the extent this incentive is binding, however, is an empirical matter that requires investigation. It is not clear from the consultation document whether TATT has given this issue any consideration and if so why or how its investigation caused TATT to reject it.		likelihood of operators charging prices that may be decoupled from economic costs and are in the interest of monopolist profits. Under the CPP regime, network operators have few or no incentives to lower the price of calls to their networks from other networks (fixed or mobile). Contrary to CCTL's claims, lowering these charges would give competitors an advantage in the retail market, as the lower wholesale cost element can theoretically mean that customers of the competitor would enjoy an overall cheaper service. Where customers enjoy a cheaper service, there is no cost incentive to switch service providers. This implies that the effect of CPP regimes enables service providers to price termination services above cost. Owing to the lack of substitutes and the CPP system, the Authority considers there to be no effective demand-side substitution for wholesale fixed and mobile termination services.

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The entire Policy Document	Digicel	 Digicel is surprised and disappointed that the procedure adopted by the Authority in its purported analysis of the potential for Dominance in Wholesale Mobile Termination Markets falls far short of the usual procedural rigour with which the Authority approaches such matters. The process adopted by the Authority is deeply flawed. The Authority has essentially examined the detailed analysis carried out by other regulators as it applies to their individual market conditions at a point in time and used these analyses to justify conclusions about the Trinidadian market. These conclusions are unsupported by specific market information. Digicel notes that Mobile Termination Rates ("MTRs") are denominated in TT Dollars whilst most network equipment is likely to be purchased from multinational suppliers and denominated in US Dollars. The decline in TT Dollar against the US Dollar coupled with domestic inflation have reduced the real value of MTRs. If as the Authority asserts operators are free to act independently of the market then they would have increased their charges. The empirical evidence from the market is that they have not. This is a strong evidenced based counterfactual to the general and generic argumentation that the Authority has used to underpin its conclusions. The Authority itself sets out that Section 29(8)(b) of the Telecommunications Act, Chapter 47:31 ("the Act") sets out that the Authority "shall take into account technology and market trends" 		The Authority wishes to clarify that it has undertaken the assessment of the competitive conditions specific to Trinidad and Tobago in the related downstream market and has updated the paper accordingly. MTRs are mandated in Trinidad and Tobago to be cost based and, based on the markets in the study, most costs have been recovered for traditional fixed and traditional mobile networks. Therefore, the impact of the decline in the TT dollar should be proven by Digicel based on its network and cost- recovery projections. However, where the real value of MTRs may be impacted during the contractual periods (though unproven) of negotiated interconnection agreements, this does not prevent operators from exercising a dominant position of determining higher rates (for recoupment) at the subsequent interconnection negotiation period. Furthermore, any evidence of exclusive dealings in interconnection agreements locally highlights the need for

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		services on the local market in Trinidad and Tobago. Digicel notes that the comparator jurisdictions relied on by the Authority carried out their respective market reviews prior to the explosive growth in OTT voice. In this regard the Authority has failed to meet its own statutory obligations in the conduct of its analysis.		addressing acts of abuse of dominance. On the issue of OTTs, the Authority has conducted an empirical analysis of termination services in the Trinidad and Tobago market, including the retail downstream market. This analysis
		The Authority has not properly defined the relevant market by adequately considering supply and demand side substitutes. In particular, at section 4(d) of this Policy Document, the Authority sets out that the retail customers' originating calls indirectly bear the cost of MTRs. In Appendix 1 of this Policy Document, the Authority sets out that two of the benchmark jurisdictions (i.e. UK and Bahrain) had considered whether alternative retail services are sufficient substitutes to the extent that the availability of retail demand and supply side substitutes. Because demand for the upstream wholesale termination service is a derived demand of the retail services that determines the demand for the wholesale product. A proper analysis of dominance in an upstream market cannot be properly conducted or relied upon to produce valid results unless there is a prior assessment of the competitive conditions in the related downstream market.		revealed that any unmeasurable constraint imposed by OTTs on retail mobile/fixed voice calls is not the point at issue. Rather, the relevant point is whether a consumer of retail mobile/fixed voice calls would, specifically in response to a 5% increase in the FTR/MTR, switch to a competing retail product. Based on the Authority's SSNIP test, there is a distinct separation between retail and wholesale and, therefore, potential competition between services of any defined retail market is not induced by a SSNIP in the termination
		Further even if the outcome of such a rigorous analysis was to define the market in the manner in which the Authority has concluded then whilst new services such as OTTs may not be sufficient substitutes to be in the same relevant wholesale market, they may exercise sufficient indirect constraint on wholesale pricing to limit or eliminate network operator's ability to act independently of the market in		 market. In conclusion, for the purpose of this assessment, the relevant market for wholesale voice termination services should not be extended to include any potential substitute of OTT-based VoIP services. The Authority further notes that it is not

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		setting MTRs. Digicel notes also that the Authority has made no real effort to distinguish between the markets for messaging and for voice. Digicel notes that while the EU considered voice termination to be one of the markets which are amenable to direct market analysis it did not designate SMS termination in this way. In fact, European regulators must carry out a so called "Three Criteria Test" on this market before moving to a market analysis. Given that one of the Authority's reference comparators is an EU jurisdiction it is surprising that the Authority has not highlighted this distinction between the markets.		 mandated to apply the three criteria test and, in reality, the Authority has gone beyond these criteria. To reiterate, the Authority has applied section 29 of the Act in accordance with the legal and regulatory framework of Trinidad and Tobago to treat with the analysis of dominance. The Authority has given consideration to Digicel's recommendation to determine operators dominant in the provision of SMS services and has updated the paper accordingly.